

EXHIBIT 1

*Defendants' Initial Expert Designations
Pursuant to Fed. R. Civ. P. 26(a)(2)*

AARON D. FORD
Attorney General
JESSICA E. WHELAN (Bar No. 14781)
Deputy Solicitor General
CASEY QUINN (Bar No. 11248)
Senior Deputy Attorney General
IVA TODROVA (Bar No. 15827)
Senior Deputy Attorney General
Office of the Nevada Attorney General
555 E. Washington Ave, Ste. 3900
Las Vegas, NV 89101
(702) 486-3420 (phone)
(702) 486-3773 (fax)
jwhelan@ag.nv.gov
cquinn@ag.nv.gov
itodorova@ag.nv.gov

Attorneys for State Defendants

**UNITED STATES DISTRICT COURT
DISTRICT OF NEVADA**

ROGER PALMER; CHAD MOXLEY; and FIREARMS POLICY COALITION, INC.

Case No. 3:21-cv-00268-MMD-CSD

Plaintiffs.

vs.

17 STEPHEN SISOLAK, Governor of Nevada;
18 AARON FORD, Attorney General of Nevada;
19 GEORGE TOGLIATTI, Director of the
Nevada Department of Public Safety;
20 MINDY MCKAY, Administrator of the
Records, Communications, and Compliance,
Division of the Nevada Department of Public
Safety;

**DEFENDANTS' INITIAL EXPERT
DESIGNATIONS PURSUANT TO
FED. R. CIV. P. 26(a)(2)**

Defendants

24 State Defendants Stephen Sisolak, Aaron Ford, George Togliatti and Mindy McKay
25 (“State Defendants”), by and through their counsel, hereby serve this initial expert witness
26 disclosure pursuant to Federal Rule of Civil Procedure 26(a)(2).

28

1 This disclosure of retained experts is governed by FED. R. CIV. P. 26(a)(2)(B). for
 2 witnesses who are retained or specifically employed to provide expert testimony in a case,
 3 the disclosure must be accompanied by a written report that contains the following:

- 4 (i) a complete statement of all opinions the witness will
 express and the basis and reasons for them;
- 5 (ii) the facts or data considered by the witness in forming
 them;
- 6 (iii) any exhibits that will be used to summarize or support
 them;
- 7 (iv) the witness's qualifications, including a list of all
 publications authored in the previous 10 years;
- 8 (v) a list of all other cases in which, during the previous 4
 years, the witness testified as an expert at trial or by
 deposition; and
- 9 (vi) a statement of the compensation to be paid for the study
 10 and testimony in the case.

11 FED. R. CIV. P. 26(a)(2)(B)(i–vi).

12 State Defendants inform Plaintiff that they have retained Professor Brian DeLay as
 13 an expert witness to provide expert testimony regarding the opinions set forth in the
 14 Declaration of Brian DeLay, attached hereto as **Exhibit 1**. The written report contained
 15 in Exhibit 1 contains (i) a complete statement of all opinions Professor DeLay will express
 16 and the basis and reasons for them; (ii) the facts or data considered by Professor DeLay in
 17 forming his opinions; and (iii) citation to supporting sources and exhibits used to support
 18 Professor DeLay's opinions. See FRCP 26(a)(2)(B).

19 Professor DeLay's *curriculum vitae* is attached to his report as **Exhibit 1-A**. Exhibit
 20 1-A contains (iv) Professor Delay's qualifications, including a list of all publications
 21 authored in the previous 10 years; and (v) a list of all other cases in which, during the
 22 previous 4 years, Professor DeLay has testified as an expert at trial or by deposition. See
 23 FRCP 26(a)(2)(B).

24 Professor DeLay's rate sheet is attached to his report as **Exhibit D**. Exhibit D
 25 includes a statement of the compensation to be paid to Professor DeLay for his study and
 26 testimony in this case. See FRCP 26(a)(2)(B).

27 ...

28 ...

1 State Defendants reserve the right to designate, as permitted by Federal Rules of
2 Civil Procedure 26(a)(2)(d)(ii), such further experts as are deemed appropriate and
3 necessary as rebuttal experts in response to the Plaintiff's disclosure of experts.

4 DATED this 19th day of April 2024.

5 AARON D. FORD
6 Attorney General

7 By: /s/ Jessica E. Whelan
8 JESSICA E. WHELAN (Bar No. 14781)
9 Deputy Solicitor General
10 CASEY QUINN (Bar No. 11248)
11 Senior Deputy Attorney General
12 IVA TODROVA (Bar No. 15827)
13 Senior Deputy Attorney General

14 *Attorneys for State Defendants*

15
16
17
18
19
20
21
22
23
24
25
26
27
28

CERTIFICATE OF SERVICE

I hereby certify that I am an employee of the Office of the Attorney General of the State of Nevada and that on this 19th day of April 2024, I caused to be mailed a true and correct copy of the document *Defendants' Initial Expert Designations Pursuant To Fed. R. Civ. P. 26(a)(2)*, via the United States Mail, first-class postage prepaid, in sealed envelopes, at Carson City, Nevada, to the following interested parties:

THE O'MARA LAW FIRM, P.C.
DAVID C. O'MARA, ESQ.
311 E. Liberty Street
Reno, NV 89501
david@omaralaw.net

THE DIGUISEPPE LAW FIRM, P.C.
RAYMOND M. DIGUISEPPE
4320 Southport-Supply Road, Ste 300
Southport, NC 28461
910.713.8804
law.rmd@gmail.com

Attorneys for Plaintiffs


An employee of the
Office of the Nevada Attorney General

1
2 **INDEX OF EXHIBITS**
3

2 EXHIBIT 3 NO.	4 EXHIBIT DESCRIPTION	5 NUMBER OF 6 PAGES
1	Declaration of Brian Delay – Written Expert Report – Materials/Evidence Reviewed – Published Credits/Recent Interviews – Biographical Information	75
1-A	<i>Curriculum Vitae</i> – Brian DeLay – Prior Testimony History (Last 4 Years)	19
B	Engravings published in 1770 as a supplement to the <i>Encyclopédie</i> , Enlightenment precise views of the (finished lock mechanism)	1
C	Engravings published in 1770 as a supplement to the <i>Encyclopédie</i> , Enlightenment precise views of the (constituent parts)	1
D	Rate Sheet Brian DeLay	1

EXHIBIT 1

Declaration of Brian DeLay

EXHIBIT 1

NEV 0006

TABLE OF CONTENTS

	PAGE
DECLARATION OF BRIAN DELAY	2
BACKGROUND AND QUALIFICATIONS	2
SUMMARY OF OPINIONS	4
A. GHOST-GUNS ARE NEW TO AMERICAN HISTORY .	5
A.1 The Flawed Historical Arguments Against Regulating Ghost Guns	9
A.2 Europe's Early-Modern Dominance of Global Arms Production	11
A.3 How Firearms Worked in the Eighteenth Century	13
A.4 Making Gun Barrels and Gun Locks in the Eighteenth Century	14
A.5 Europe's Competitive Advantage in Firearm Production	19
A.6 Only Professional Gunsmiths Could Make Firearms in Early America, and Even Professional Gunsmiths Seldom Made Firearms from Scratch .	22
A.7 Colonists Could Not Make the Arms They Needed in Times Of Crisis	30
A.8 At No Point Did the American Revolution Rely on Self-Made Firearms	33
A.9 America Only Developed a Productive Firearms Industry After 1791, And It Was Led by the State	39
B. A.B. 286 CONFORMS TO THIS NATION'S HISTORICAL TRADITION OF FIREARM REGULATION	44
B.1 The Differences Between 18 th - and 21 st -Century Gun Culture	45
B.2 State Regulation Was Potent Enough to Shape the Geography of Gun Ownership in Early America	52
B.3 Early America's Historical Tradition of Firearms Regulation Emerged Out of a Concern for Public Safety – As Authorities at the Time Defined it	56
B.4 Amateur Arms-Making Was Irrelevant to Colonial Firearms Regulation & to the Second Amendment	63
B.5 The Evolving Tradition of Firearms Regulation in the United States	67
CONCLUSION	74

DECLARATION OF BRIAN DELAY

I, Brian DeLay, the undersigned, declare as follows:

BACKGROUND AND QUALIFICATIONS

1. I am Professor of History and the Preston Hotchkis Chair in the History of the United States at the University of California, Berkeley. I received my B.A. from the University of Colorado, Boulder (1994), and my M.A. (1998) and Ph.D. (2004) from Harvard University. My first book, *War of a Thousand Deserts: Indian Raids and the U.S.-Mexican War* (Yale University Press, 2008), underwent blind peer-review before publication and won best book prizes from several different scholarly organizations. Since 2008, I have been working on three interrelated projects about the historic arms trade: a monograph about the arms trade in the era of American Revolutions (under contract with W.W. Norton and scheduled to be published in 2025); a second monograph about guns, freedom, and domination in the Americas from 1800-1945 (also under contract with W.W. Norton); and a database tracking the global trade in arms and ammunition between the end of the Napoleonic Wars and start of World War I. These projects are grounded in primary-source research in archives in the United States, England, Spain, and Mexico.

2. I have delivered around three dozen invited presentations on firearms history at academic conferences and universities in the U.S. and abroad, including Harvard University, the University of Chicago, Stanford University, Oxford University, Cambridge University, the University of Melbourne, Doshisha University in Kyoto, Japan, and the Zentrum für Interdisziplinäre Forschung (ZIF), in Bielefeld, Germany. I have given interviews on the history of firearms and the gun business for the British Broadcasting

Service (BBC), as well as for the Australian Broadcasting Corporation (ABC), and public radio stations in the United States. In September 2023, my 21,000-word article "The Arms Trade & American Revolutions" was published in the *American Historical Review*, the flagship journal of the history discipline. In addition to scrutiny from the journal's editor and members of the board of editors (all prominent academic historians), this article underwent two rounds of double-blind peer review where it was critiqued by seven experts in the field before being accepted for publication. This is my second article published in the *AHR*, and it has just been awarded the Vandervort Prize by the Society for Military History.

3. My research on the history of firearms has been supported by grants from the American Philosophical Society, the British Academy, the American Council of Learned Societies (twice), and the Stanford Humanities Center, among other organizations. In 2019, I was awarded a Guggenheim fellowship to support my work on firearms and American history.

4. In addition to my work on this case, I've served as an expert witness in *Hanson v. District of Columbia*, 22-cv-02256 (D.D.C.); *Arnold v. Tina Kotek, et al.*, No. 22-cv-41008 (Harney Cty. Cir. Ct.); *Oregon Firearms Federation, et al., v. Tina Kotek, et. al.*, 22-cv-01815 (D. Ore.)¹; *Harrel v. Raoul*, 23-cv-141-SPM (S.D. Ill.); *Langley v. Kelly*, 23-cv-192-NJR (S.D. Ill.); *Barnett v. Raoul*, 23-cv-209-RJD (S.D. Ill.); *Federal Firearms Licensees of Illinois v. Pritzker*, 23-cv-215-NJR (S.D. Ill.); *Herrera v. Raoul*, 23-cv-532 (N.D. Ill.); *Kenneally v. Raoul*,

¹ *Oregon Firearms Federation et al., v. Tina Kotek et. al.*, has been consolidated with three other actions: *Fitz v. Rosenblum et al.*, 3:22-cv-01859 (D. Ore.), *Eyre v. Rosenblum et al.*, 3:22-cv-01862 (D. Ore.), and *Azzopardi v. Rosenblum et al.*, 3:22-cv-01869 (D. Ore.).

et al., 23-cv-50039 (N.D. Ill.); *William Wiese, et al., v. Rob Bonta, et al.*, 2:17-cv-00903 (E.D. Cal); *Gabriella Sullivan, et al., v. Bob Ferguson, et al.*, 3:22-cv-05403 (W.D. Wash.); *Rocky Mountain Gun Owners et al., v. The Town of Superior et al.*, 22-cv-2680 (D. Col.); *Association of New Jersey Rifle & Pistol Clubs, Inc., et al. v. Platkin et al.*, 3:18-cv-10507 (D.N.J.); *Cheeseman et al. v. Platkin et al.*, 1:22-cv-04360 (D.N.J.); *Ellman et al. v. Platkin et al.*, 3:22-cv-04397 (D.N.J.); *John Rigby et al. v. Kathy Jennings et al.*, 1:21-cv-01523-MN (D. Del.); Lawrence Hartford, et al., v. Bob Ferguson, et al., 3:23-cv-05364-RJB (W.D. Wash); *Banta, et al. v. Ferguson and Batiste*, No. 2:23-cv-00112-MKD; *Guardian Arms, et al., v. State of Washington, et al.*, No. 23-2-01761-34; and National Association of Gun Rights et al., v. Jared S. Polis (D. Colo), 24-cv-00001-GPG-STV. The cases in the last four years in which I testified are *Oregon Firearms Federation, supra*, *Arnold v. Kotek, supra*, and *National Association of Gun Rights v. Polis, supra*.

5. A true and correct copy of my curriculum vitae is attached as Exhibit A to this report. For my work in this matter, I am being compensated at a rate of \$250/hr. for research and writing, and \$400/hr. for travel, deposition, and hearings.

SUMMARY OF OPINIONS

6. Today, kits or 3D printers allow consumers with no skills and few tools to quickly assemble functioning firearms. Firearms assembled this way are “ghost guns,” because a loophole in the 1968 Gun Control Act frees them from the federal requirement that firearms must bear serial numbers. A.B. 286 closes that loophole. Plaintiffs and others opposed to the serialization requirement argue (1) that today’s consumers of kits and printers of guns are doing the same thing that Americans have been doing since the colonial era, and

(2) that subjecting them to regulation would be inconsistent with this country's history and tradition of firearms regulation. Neither claim is historically correct.

7. This declaration has two parts. Part A argues that ghost guns are new to American history. It explains that whereas today's consumers of ghost gun kits merely have to *assemble* firearms, early Americans had to *make* firearms; details why firearms were too difficult for amateurs to make in the colonial- and founding-eras, even when they imported some of the more complex components; demonstrates why Americans were so dependent on imports, and explains why, contrary to Plaintiffs' claims, they were never able to rely on "the manufacture of firearms by those outside the firearms industry"² for any emergency, including the American Revolution. Part B argues that A.B. 286 is consistent with the American tradition of firearms regulation. It begins with the differences between gun culture in early America and our in own times, demonstrates that the colonial- and founding-era regulatory tradition focused on public safety, explains how Americans repeatedly responded to dramatic technological changes and unprecedented societal concerns by building on that tradition over the next two centuries, and shows that ghost gun laws continue that tradition.

A. Ghost-Guns Are New to American History

8. Major arms manufacturers began stamping serial numbers on firearms as early as the mid-nineteenth century. Finding industry serialization useful in investigating crime, states began incorporating these numbers into firearms law in the early twentieth century. The federal government first required serial numbers in 1958,³ and these rules were

² *Palmer v. Sisolak*, Case No. 3:21-cv-00268 (D. Nev.), ECF No. 1, ¶ 50.

³ Interstate Traffic in Firearms and Ammunition, 26 CFR 79.

elaborated in the landmark 1968 Gun Control Act. Still in force today, the GCA requires producers and importers of firearms to obtain Federal Firearms Licenses, and to stamp serial numbers and other markings on their guns' frames or receivers (the "primary structural component of a firearm to which fire control is attached").⁴ Finished frames or receivers are treated as firearms by the GCA, and subject to this same requirement. In the years since, these regulations have become essential tools for federal, state, and local authorities investigating gun crime.⁵

9. The GCA contained an exemption for hobbyists who made their own firearms for personal use. Some began purchasing partially finished steel frames and receivers, which, unlike the fully finished versions, are not legally regarded as firearms or required to bear serial numbers. Most such consumers had to employ a machinist or gunsmith to finish these parts before they could be used to assemble a working firearm.⁶ Over the past fifteen years or so, however, advances in polymers, small-batch parts manufacturing, compact control milling devices, and, most recently, 3D-printing and computer-aided design (CAD) files have helped firearms entrepreneurs turn the GCA's hobbyist exception into a dynamic sub-industry. Their products enable unskilled buyers to easily assemble their own guns without professional assistance and often without specialized tools.⁷

⁴ Codified as 18 U.S.C. §§ 921–934. For A.T.F. definition, see <https://www.federalregister.gov/documents/2021/05/21/2021-10058/definition-of-frame-or-receiver-and-identification-of-firearms>, last accessed July 30, 2023. On pistols this component is called a frame, and on semi-automatic rifles it is called a receiver.

⁵ William J. Krouse, *Privately Made Firearms: A Growing Source of Unmarked, Untraceable 'Ghost Guns'*? CONGRESSIONAL RESEARCH SERVICE REPORT IF11810, April 8, 2021.

⁶ *Id.*

⁷ *Id.*

10. Fully functional semi-automatic pistols and rifles can now be rapidly assembled at home with kits purchased online or in stores. For instance, 80% Arms, a prominent online vendor, offers an array of unfinished frames and receivers. They sell kits that include the other parts necessary to assemble a working firearm (none of which are regulated by the GCA, so they can be sold finished). The kit for a GST-9 pistol (modeled after a Glock-19) also comes with an Allen wrench, two drill bits, a cutting tool, and a one-page, color-coded instruction sheet.⁸ Customers simply place the unfinished frame in a jig that guides them as they drill three holes on each side of the polymer frame, remove four small tabs with cutting pliers, and grind out one final piece of the frame with the cutting tool.⁹ They now have a finished frame, and can quickly assemble the rest of the components with the help of an array of online instructional videos.¹⁰

11. In most of the country, consumers can buy gun kits like these without passing a background check, meeting minimum age requirements, or enduring waiting periods, and then, with no specialized experience or unusual tools, quickly assemble a reliable, unserialized firearm. Such “ghost-guns” have provoked concerns over trafficking¹¹ and extremist

⁸ <https://www.80percentarms.com/products/gst-9-80-pistol-build-kit/>, last accessed July 31, 2023

⁹ <https://www.80percentarms.com/content/GST9%20MANUAL%20FINAL%20V2.pdf>, last accessed July 31, 2023

¹⁰ <https://odysee.com/@80PercentArms:0>, last accessed July 31, 2023.

¹¹ See for example, the Drug Enforcement Administration’s press release *Ghost Gun and Narcotics Trafficking Ring Shut Down in NYC*, DEA.GOV (Mar. 15, 2023), <https://www.dea.gov/press-releases/2023/03/15/ghost-gun-and-narcotics-trafficking-ring-shut-down-nyc>.

violence,¹² and alarm over the ease with which teenagers are purchasing them.¹³ They are also increasingly prominent in gun crime, which presents significant challenges to law enforcement precisely because they are so difficult to trace. The number of “privately made firearms” submitted for tracing to the bureau of Alcohol, Tobacco, and Firearms increased by more than 1000% between 2017 and 2021.¹⁴ In late 2021, the *New York Times* reported that they accounted for a quarter to half of all guns recovered at crime scenes in Los Angeles, San Diego, Oakland, and San Francisco.¹⁵

12. Regulators have responded to these unprecedented societal concerns with legislation. As of February 2024, Nevada is one of thirteen states (and several municipalities) that have enacted legislation to regulate the sale and manufacture of ghost guns. These regulations differ in detail, but all seek to prohibit untraceable firearms.¹⁶

¹² Alain Stephens, *The Feds Are Increasingly Worried about Extremists Acquiring Ghost Guns, Leaked Report Shows*, THE TRACE (Aug. 6, 2021), <https://www.thetrace.org/2021/08/ghost-gun-government-report-3d-print-extremism-terrorism/>.

¹³ Tom Jackman and Emily Davies, *Teens Buying ‘Ghost Guns’ Online, with Deadly Consequences*, THE WASH. POST (July 12, 2023).

¹⁴ U.S. DEPT. OF JUSTICE, NATIONAL FIREARMS IN COMMERCE AND TRAFFICKING ASSESSMENT, VOL. TWO: CRIME GUNS; PART III: CRIME GUNS RECOVERED AND TRACED WITHIN THE UNITED STATES AND ITS TERRITORIES 5 (2022), available at <https://www.atf.gov/firearms/docs/report/nfcta-volume-ii-part-iii-crime-guns-recovered-and-traced-us/download>.

¹⁵ Glenn Thrush, *‘Ghost Guns’: Firearm Kits Bought Online Fuel Epidemic of Violence*, NY TIMES (Nov. 14, 2021), <https://www.nytimes.com/2021/11/14/us/ghost-guns-homemade-firearms.html>.

¹⁶ The states are California, Illinois, Colorado, Hawaii, Nevada, Delaware, Maryland, Connecticut, New Jersey, New York, Washington, Oregon, and Rhode Island. Virginia and Massachusetts have regulations against plastic guns undetectable by metal detectors. *Which States Regulate Ghost Guns?*, EVERYTOWN FOR GUN SAFETY, <https://everytownresearch.org/rankings/law/ghost-guns-regulated/> (last visited February 13, 2023).

A.1 The Flawed Historical Arguments Against Regulating Ghost Guns

13. Opponents of these efforts to hold ghost guns to some of the same regulatory standards as professionally made guns are conjuring a false historic continuity to challenge the laws in court. Joseph Greenlee, a lawyer and gun-rights activist who now directs the office of litigation counsel for the National Rifle Association, elaborated the thesis in a 2023 article in the *Saint Mary's Law Journal*.¹⁷ As its title suggests, "The American Tradition of Self-Made Arms" argues that today's printers and assemblers of ghost guns are part of a venerable national tradition of "at-home arms production," one that stretches back into the colonial era.¹⁸ Similar claims were made before a Congressional committee on ghost guns in 2021.¹⁹ The historical argument, in brief, is that (1) private citizens have been making their own arms since the founding era; (2) the founders did nothing about it; (3) therefore we can do nothing about it, either. This basic argument is already finding its way into legal challenges,²⁰ including the one now before this court.

14. The self-made-arms-narrative deploys three kinds of categorical confusion to conjure a tradition out of the historical record. First, to expand the terrain within which useful historical analogues might be located, it defines "arms-making" to include an implausibly huge range of activities. Pursuits as dissimilar as manufacturing high-quality firearms from scratch,

¹⁷ Joseph G.S. Greenlee, *The American Tradition of Self-Made Arms*, 54 ST. MARY'S L.J. 35 (2023).

¹⁸ *Id.* at 50.

¹⁹ Testimony of Ashley Hlebinsky, United States Senate, Subcommittee on the Constitution, Committee on the Judiciary, Stop Gun Violence: Ghost Guns, May 11, 2021, <https://www.judiciary.senate.gov/imo/media/doc/Ashley%20Hlebinsky%20Written%20Testimony%20Final.pdf>

²⁰ See for example Greenlee's expert declaration in Roger Palmer et al., v. Stephen Sisolak et al., No. 3:21-cv-00268 (D. Nev.); and Complaint for Declaratory and Injunctive Relief at 6, Defense Distributed et al., v. Rob Bonta et al., No. 2:22-cv-06200-CAS-AGR (C.D. Cal.).

performing minor repairs, and even filling paper cartridges with a measure of gunpowder and a lead ball all constitute “arms-making” according to this analysis.²¹

15. Second, the narrative conflates amateurs with professionals. No one doubts that there has long been an arms industry in the United States, or that the industry has long employed professionals with specialized skills in firearms production. Ghost gun kits are not aimed at professionals. They are explicitly designed for and marketed to amateurs.” On its website, for instance, 80% Arms assures customers that its AR-15 and .308 jigs make it “ridiculously easy for a non-machinist to finish their 80% lower in under one hour with no drill press required.”²² In their complaint, Plaintiffs agree that even the AR-15 kits are “relatively easily constructed.”²³ The relevant historical issue, then, concerns *amateur* arms production. Gun-rights advocates could not substantiate a longstanding tradition of “amateur-made arms,” however. Hence the sleight-of-hand made possible by the phrase “self-made,” which is roomy and abstract enough for them to link today’s consumers of ghost-gun kits with Samuel Colt, Benjamin Tyler Henry, John Browning, and others of the nation’s most accomplished professional gunsmiths.²⁴

16. Finally, the self-*made*-arms narrative mischaracterizes what it is that consumers are actually doing with ghost-gun kits and 3D-printers. They are not making guns, but rather *assembling* them. Here gun-rights activists owe a debt to the federal government

²¹ For the equation of cartridge-making with “the convenience of at-home arms production,” see Greenlee, *supra* note 17, at 50.

²² See the tab “Ridiculously Easy” on [HTTPS://WWW.80PERCENTARMS.COM/](https://www.80percentarms.com/), last accessed July 30, 2023.

²³ *Supra*, note **Error! Bookmark not defined.**, at 140.

²⁴ Greenlee, *supra* note 17, at 73-76. The overwhelming majority of examples Greenlee offers in his article concern professional gun-makers.

and its unfortunate adoption of the label “privately made firearm” (PMF) for the category to which guns from kits and printers belong.²⁵ The distinction between making and assembling bears upon the constitutional question at stake in these cases. The conceit that consumers are using kits to “make” arms is critical to the argument that these amateurs belong to a “long and storied tradition in America,” as the president for the National Association of Gun Rights recently put it.²⁶ But what if amateurs are merely availing themselves of a novel product that enables them to “assemble” arms? Consider a familiar comparison. Several years ago, I purchased a dining table and a set of chairs from Ikea. Everything came disassembled and packed in boxes. It took me a few hours and some basic tools to assemble the pieces. My table and chairs have held up well. But no one I have had over for dinner in the years since consider me a “furniture maker.” There is a proud tradition of furniture making in this country stretching back into the colonial era. No one seriously thinks I am part of that tradition.

17. The operative question, then, is whether there is a venerable American tradition of amateurs assembling firearms? The answer is no. Explaining why requires an examination of how firearms were built before the nineteenth century; where they were built, by whom, and why; and the nature of firearms production in early America.

A.2 Europe’s Early-Modern Dominance of Global Arms Production

18. Europeans manufactured and distributed the vast majority of the eighteenth-century world’s firearms. While gunpowder and gunpowder weapons originated in China, Europe became the global center of firearm innovation starting in the late seventeenth

²⁵ See <https://www.atf.gov/rules-and-regulations/qa/what-privately-made-firearm-pmf>, last accessed July 31, 2023.

²⁶ Quoted in Jackman and Davies, *supra* note 13.

century. As European gun-making became more sophisticated, specialized, and efficient, most of the rest of the world chose to import guns than try and compete through domestic manufacturing. While quality arms production persisted in the Ottoman Empire, China, and some polities of South and Southeast Asia, it often involved European advisors and usually supplemented rather than replaced imports from Europe.²⁷ The dominance of western European manufacturers meant that they were the ones equipping Europe's huge armies, navies, coast guards, sheriffs, and militias; supplying the continent's domestic firearms markets; arming its vast merchant marine and the huge trading companies that extracted so much wealth from the rest of the world; outfitting European allies and mercenaries in wartime; and shipping hundreds of thousands of inexpensive guns annually to Africa by mid-century, as fuel for the inferno of the Atlantic slave trade.²⁸

19. Europeans gunmakers were also responsible for all but a tiny percentage of the firearms that anyone ever laid eyes on in the colonial Americas. To understand why so few of America's guns were made even by gunsmiths in America, let alone by nonexperts, we have to understand how firearms worked and how they were manufactured.

²⁷ As Peter Lorge puts it, Asia "became part of the European arms trading system" starting in the sixteenth century. PETER A. LORGE, THE ASIAN MILITARY REVOLUTION: FROM GUNPOWDER TO THE BOMB 17, 89–90 (2008). For production in South Asia, see PRIYA SATIA, EMPIRE OF GUNS: THE VIOLENT MAKING OF THE INDUSTRIAL REVOLUTION 176–80, 285–99 (2019); EMRYS CHEW, ARMING THE PERIPHERY: THE ARMS TRADE IN THE INDIAN OCEAN DURING THE AGE OF GLOBAL EMPIRE 28–36 (2012). Kenneth Chase argues that Europe's advantages in designing and producing firearms primarily followed from the fact that Europe was threatened by infantries (which firearms are effective against), rather than nomads (which they are less effective against). See KENNETH CHASE, FIREARMS: A GLOBAL HISTORY TO 1700 (2003).

²⁸ For a sweeping overview of the history of arms making and power, see McNeill, THE PURSUIT OF POWER: TECHNOLOGY, ARMED FORCE, AND SOCIETY SINCE A.D. 1000 233–34 (1982). For Africa, see J.E. Inikori, *The Import of Firearms into West Africa 1750–1807: A Quantitative Analysis*, 18 J. AFR. HIST. 339, 343–49 (1977).

A.3 How Firearms Worked in the Eighteenth Century

20. Firearms were the most technologically complex objects most people ever encountered in the eighteenth century. With a primed, loaded, and cocked musket pressed against the shoulder, a simple squeeze of the index finger unleashed a kind of magic. That squeeze initiated a series of movements inside the lock mechanism. The pulled trigger rotated small iron wedge called a sear, which held a gear called a tumbler in place. With the sear released, the tumbler rotated forward—propelled by a spring that had been tensed when the shooter first cocked the gun. The cock (or hammer), connected to the tumbler, also rotated forward, with force. Atop the cock a simple vice gripped a sharpened piece of flint, and as it rotated downward the flint skidded into a concave, serrated steel plate called a frizzen.²⁹

21. Flint is one of nature's hardest materials; hard enough that when it hits iron or steel with enough force and at the right angle some of the metal gives way, showering off in a glowing spray of super-heated flakes. Thanks to the elegant design of the flintlock mechanism, when the cock and flint fell forward the frizzen was shoved backward on its pin, exposing a little pan full of fine, black gunpowder. That is when human energy traveling through levers and springs unleashed chemical energy. The cascading metal sparks ignited this powder, and a tongue of flame darted down from the pan through a small touchhole into the barrel of the musket, where the shooter had earlier packed in a larger charge of gunpowder. That charge ignited. Trapped by the barrel's walls and the breech-plug at the rear, the explosion traveled the only direction it could, forward. In so doing it drove before it an obstacle, the musket ball,

²⁹ Many books offer lucid explanations of the workings of flintlock firearms. See for example M. L. BROWN, FIREARMS IN COLONIAL AMERICA: THE IMPACT ON HISTORY AND TECHNOLOGY: 1492-1792 68-79 (1980); and W. Y. CARMAN, A HISTORY OF FIREARMS: FROM EARLIEST TIMES TO 1914 100-04 (1955).

a lead sphere that clanged and screamed down the length of the barrel, took to the air, and flew.³⁰

22. The remarkable tool that made all this happen had four basic components: a wooden stock, a lock (ignition) mechanism made of iron and steel, an iron barrel, and a group of metal parts (usually brass) called “furniture,” including a butt-plate, trigger guard, and ramrod pipe. Carpenters could make serviceable stocks, and blacksmiths could cast, file, and polish brass furniture. Reliable barrels and locks, however, were very difficult to produce and extraordinarily difficult to produce in quantity.

A.4 Making Gun Barrels and Gun Locks in the Eighteenth Century

23. The barrels of eighteenth-century firearms were made from wrought iron – nearly pure iron that is repeatedly heated and worked into shape with tools. Low carbon content made wrought iron softer and much more ductile than the most common alternative, cast iron (an iron alloy with a lower melting temperature that was used in molds). Wrought iron’s relative pliability meant it could withstand the extreme pressures of repeated gunpowder explosions.³¹ That is, wrought-iron gun barrels could withstand these pressures if they were well made. Barrel-makers from the era heated iron slabs and then laboriously hammered them into shape and welded them together around a tapered iron rod called a mandrel. The mandrel’s diameter would be slightly narrower than the intended bore of the firearm. The iron wrapped around the mandrel was repeatedly heated and hammered on an anvil cut with grooves corresponding to the desired shape of the barrel. Eventually, the iron

³⁰ *Id.*

³¹ ROBERT B. GORDON, AMERICAN IRON, 1607-1900 7-11 (2020).

took the form of a tube with an open seam, thicker at one end so that the breech of the gun would be able to endure the shock of the charge.³²

24. Great care had to be taken in closing the seam, lest the barrel burst upon firing. Once the seam had been sealed, the interior had to be bored. A steel bit affixed to a hand-turned drill was twisted into the barrel, scraping out a thin layer of iron with each pass. This difficult process would be repeated over and over, each time with a slightly larger bit, until the diameter of the bore reached the desired caliber. At this point the breech had to be closed, either by screwing in a threaded iron plug, or by heating and hammering in a plug without threads. Then the touch-hole would be drilled or punched at the breech, and the rough exterior of the barrel would be ground down to a pre-determined thickness and filed smooth.³³ Untreated iron oxidizes (rusts) when exposed to air or, especially, moisture. Once begun, this process will not stop on its own; it will continue until the integrity of the iron object has been totally compromised. Barrel makers learned to treat barrels with chemicals that artificially accelerate and then arrest the oxidization process.³⁴ Finally, barrel loops would be braised onto the underside and a stud braised on the top, near the muzzle, to act as a sight and (for military arms) as a stop for a socket bayonet.³⁵

25. Badly made or poorly maintained barrels could fail, laming or even killing the shooter. Henry Knox, one of George Washington's top lieutenants during the Revolution and

³² For barrels, see BROWN, *supra* note 29, at 17–20; DE WITT BAILEY, SMALL ARMS OF THE BRITISH FORCES IN AMERICA: 1664–1815 95–97 (2009).

³³ *Id.*

³⁴ For barrel “browning,” see GREENER, W. W. GREENER, THE GUN AND ITS DEVELOPMENT 279–81 (9th ed. 1910).

³⁵ BAILEY, *supra* note 32, at 95.

the nation's first Secretary of War, had two fingers blown off his left hand when the breech of his fowling piece burst.³⁶ He got off easy. Given how one must cradle a longarm in order to shoot it, the explosive shards of iron from the burst barrel could just as easily have gone into his eyes, chest, or throat. With the stakes of inferior craftsmanship literally a matter of life-and-death, the major arms-producing states of Europe required finished gun barrels to undergo rigorous inspection. Barrels would be "viewed" (their bore measured with a rod gauge; the muzzle diameter checked with a socket gauge; and the soundness of the braising confirmed), and then be "proved" (charged with twice the standard load of powder, fired, left to sit for forty-eight hours, and then closely examined for the tell-tale signs of rust that would betray any stress fractures).³⁷ In the mid-eighteenth century, fully a quarter of the musket barrels made for the French military typically failed proof. It was not easy to work slabs of iron into a quality barrel, in other words, even for craftsmen paid to do nothing else.³⁸

26. It was more challenging still to make quality gunlocks. Flintlock mechanisms consisted of more than a dozen separate parts, some fixed and others moveable, all required to operate in symmetry in order to produce the intended effect. Engravings published in 1770 as a supplement to the *Encyclopédie*, Enlightenment France's great monument to knowledge, provide precise views of the finished lock mechanism (Exhibit B) and its constituent parts (Exhibit C). Lock makers in eighteenth-century Europe generally used hardened dies to make the larger pieces. Small, red-hot bars of iron would be pounded into dies cut in the shape of

³⁶ BROWN, *supra* note 29, at 299.

³⁷ BAILEY, *supra* note 35, at 95–97.

³⁸ KEN ALDER, ENGINEERING THE REVOLUTION: ARMS AND ENLIGHTENMENT IN FRANCE: 1763-1815 174 (1997).

the lock-plate, cock, hammer, tumbler, bridle, sear, frizzen, and trigger. It usually took multiple firings before a component part was properly forged to shape, which made the metal brittle. Lock-makers therefore had to soften (anneal) it with controlled reheating and cooling it in powdered charcoal inside cast-iron chests.³⁹ Some parts required additional steps. The tumbler (Exhibit C, fig. 17), for example, which transmitted the main spring's energy to the hammer, featured graded notches that had to be filed with near precision for the lock mechanism to function correctly.⁴⁰

27. Once properly formed and cooled, the pieces would be knocked out of the dies and excess metal cut and filed off to ready them for assembly. Screws of various lengths and diameters had to be cut to size, to affix the smaller parts to the lock plate and the lock plate to the stock. Threads for metal screws would be cut on a steel screw plate, and those for wood on a lathe.⁴¹ The hammer and frizzen had to be hardened before these parts could endure their constant collisions without quickly wearing down. They were "case-hardened" by being heated with charcoal inside a sealed box to import carbon to their surface, creating a hard skin, or "case."⁴²

28. The most finicky parts of a gunlock were its three delicate springs. The battery spring (Fig. 2, #21) held the frizzen in place, so that the pan cover (attached to the frizzen) kept the priming charge covered until firing. The sear spring (Exhibit C, fig. 18), smallest of the

³⁹ See MERRITT ROE SMITH, HARPERS FERRY ARMORY AND THE NEW TECHNOLOGY: THE CHALLENGE OF CHANGE 86-89 (1977).

⁴⁰ *Id.*, at 90.

⁴¹ *Id.* For gunlock making (and a deeper engagement with the ENCYCLOPÉDIE), see also BROWN, *supra* note 29, at 68-79, 200-207; BAILEY, *supra* note 32, at 95-96.

⁴² For case hardening, see GORDON, *supra* note 31, at 255.

three springs, imparted tension to the trigger. The mainspring (Exhibit C, fig. 19) the largest and most important, absorbed energy when the shooter cocked the gun and then released that energy to power the cock's descent after the trigger was pulled.⁴³

29. While case hardening sufficed for hammers and frizzens, that was insufficient for springs. Springs had to be made from steel, otherwise they would not return to their original shape after repeatedly coming under stress. This requirement introduced still more technical difficulties into the gun-making process because quality steel was extremely challenging to produce. Steel is an alloy of iron and around 1-1.5% carbon. Though it could be made by reducing the carbon (and other impurities) from cast iron, more typically steelmakers produced it by boosting the carbon content of wrought iron. They tightly packed iron and charcoal dust in chests made of stone, sealed them fast with clay and sand, and fired the chests red-hot in a furnace for several days so that the carbon could diffuse not just into the skin but throughout the iron. Success yielded something called blister steel, on account of the surface blisters left behind from the escaping carbon monoxide gases produced in firing.⁴⁴

30. But success was far from guaranteed. Overheating or inadequate seals were two of the more common missteps that could ruin the process. And even when all tasks were performed correctly, furnaces would not produce blister steel without pure iron. Though the chemistry would not be understood for decades, only iron low in phosphorus could be made into steel because phosphorus inhibits the carbon diffusion process. Even with the right

⁴³ For the evolution of lock designs and the critical role of springs, see BROWN, *supra* note 29, at 68-79.

⁴⁴ GORDON, *supra* note 31, at 173-76.

process and materials, the quality of blister steel varied considerably.⁴⁵ In the mid-eighteenth century, Sheffield watchmaker Benjamin Huntsman set about trying to improve upon the mediocre steel available for his watch springs. He eventually pioneered the crucible method of purifying blister steel into something far more consistent and useful. It relied on exceptionally pure Swedish iron, and on crucibles made from Stourbridge Clay found in England's West Midlands. This unusual clay was strong enough to bear the weight and the heat of molten steel, but sufficiently free from any of the chemicals that would corrupt the carbon diffusion process. The great superiority of Huntsman's method, and the great difficulty of replicating it or its materials anywhere else, meant that steelmakers in and around Sheffield would dominate the international industry well past the mid-nineteenth century.⁴⁶

A.5 Europe's Competitive Advantage in Firearm Production

31. Given the technical and material challenges involved in making quality firearms, dominant producers were those with regular access to high-quality materials, and who could sustain economies of scale while reliably policing quality. It is unsurprising, then, that the vast majority of firearms built in the eighteenth-century came from London and Birmingham, England; Liège, Belgium; Placencia, Spain; Saint-Etienne, France, and a few other European cities where the regional economies had for decades been oriented around arms production. These were the manufacturing centers that armed Europe's armies, navies, coast guards, sheriffs, and militias; that supplied its domestic firearms markets; that equipped its vast merchant marine and the huge, parasitic trading companies that extracted so much wealth

⁴⁵ The problem with phosphorus is a recurring topic in *id.*

⁴⁶ *Id.* at 171–84.

from the rest of the world; that outfitted European allies and mercenaries in wartime; that shipped nearly four hundred thousand inexpensive guns annually to Africa by mid-century, as fuel for the inferno of the Atlantic slave trade; and that manufactured nearly every firearm that anyone ever laid eyes on in the colonial Americas.⁴⁷

32. A visitor to Saint-Etienne, where the Manufacture Royale turned out more than a quarter million muskets in 1772 alone, likened the city to an ants' nest. "You cannot have any idea of the number of forges and their activity," he reported to his fiancée. The city and its environs choked with gloom, "perpetually shrouded in coal smoke which penetrates everywhere." The visitor marveled at Saint-Etienne's thousands of armorers, metalworkers, and ironmongers, with their "white eyes that stare at passers-by even as they busily continue working." It seemed as if nearly all the area's thirty-thousand inhabitants – not just men, but also women and children with their wiry forearms and soot-black faces – were heaving, sweating, and clanging away at gun-work. "These are the true dens of Vulcan."⁴⁸

33. The great gun-making centers were organized in different ways. By the 1770s France had come to embrace mechanization to a far greater extent than Britain, for example. But all of Europe's major arms producers employed a complex division of labor. Rather than tens of thousands of gun-makers producing firearms from scratch, there were tens of thousands of specialists responsible for a particular component or process. More than two-dozen sub-trades went into making a musket at Saint-Etienne. Merely producing a quality barrel involved four supervisors overseeing thirteen armorers.⁴⁹ Elsewhere one would find

⁴⁷ Inikori, *supra* note 28, at 343–49.

⁴⁸ For Saint-Etienne, see the masterful book by ALDER, *supra* note 38, at 163–201.

⁴⁹ *Id.*, at 176, 201.

rough-stockers and woodcarvers; barrel-forgers, barrel-borers, barrel-straighteners, and barrel-browners; lock-makers who either employed or sub-contracted out to others who specialized in forging lock-parts, or casehardening and polishing, or making steel springs, or producing pins and screws. Then there were the filers, furniture casters, sight-fitters, engravers, and, finally, the finishers whose job it was to put everything together.⁵⁰

34. This complex division of labor improved quality and uniformity, as well as profitability and productive capacity. During the Seven Years' War (1756-1763), for example, the forty craftsmen working for London stocker Richard Waller were able to produce more than two hundred and fifty thousand musket stocks for the British Ordnance office. With fewer than three dozen filers and fitters working under him, the finisher John Hirst turned out nearly three hundred thousand muskets in the same short period.⁵¹ Artisans in the dozens of specializations that went into the gun trade spent perhaps a decade developing their skills with a master. Guilds gave coherence, structure, and collective influence to individual professions. The state enforced demanding regulations and quality tests, and steady contracts from great monarchs and powerful merchants nursed the entire enterprise.⁵²

35. Nothing remotely comparable existed anywhere in colonial America. What, then, are we to make of all the *gunsmiths* in the colonies?

/ / /

⁵⁰ BAILEY, *supra* note 32, at 95-99.

⁵¹ For Waller and Hirst, see BROWN, *supra* note 29, at 235-36.

⁵² Exemplary studies of gun-making centers include DE WITT BAILEY AND DOUGLAS A. NIE, ENGLISH GUNMAKERS: THE BIRMINGHAM AND PROVINCIAL GUN TRADE IN THE 18TH AND 19TH CENTURY (1978); CLAUDE GAIER, FOUR CENTURIES OF LIÈGE GUNMAKING (1985); ALDER, *supra* note 38.

A.6 Only Professional Gunsmiths Could Make Firearms in Early America, and Even Professional Gunsmiths Seldom Made Firearms from Scratch

36. As of 2020, there were nearly eight million registered automobiles in the state of Florida.⁵³ There are no vehicle production or assembly plants in the state, so Floridians drive automobiles made in other states or countries.⁵⁴ Most Floridians have easy access to service stations and oil change shops for routine maintenance. In the event of damage or malfunction beyond the routine, Floridians turn to one of the nearly thirty thousand auto mechanics or body shops in the state for repairs.⁵⁵ Some of Florida's professional mechanics and hobbyists have the requisite skill and experience to build cars from imported parts. But thanks to the transparency of modern industrial statistics, the distinction the English language makes between auto *manufacturing*, auto *maintenance*, and auto *repair*, and the fact that there are no legal, ideological, or corporate incentives to claim that Floridians make the cars they drive, we can all agree that while the state has a lot of cars, a lot of maintenance and repair shops, and individuals with mechanical skill, the state's population nonetheless imports its millions of vehicles.

⁵³ 7,853,979 registrations in 2021, according to Statista. *Automobile Registrations in the United States in 2021, by State*, STATISTA (Sept. 28, 2023), <https://www.statista.com/statistics/196010/total-number-of-registered-automobiles-in-the-us-by-state/>.

⁵⁴ See Anh Bui, P. Slowik, and N. Lutsey, *Power Play: Evaluating the US Position in the Global Electric Vehicle Transition*, INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION 17 (2021), available at <https://theicct.org/wp-content/uploads/2021/12/us-position-global-ev-jun2021-1.pdf>.

⁵⁵ According to IBIS World, in 2022 there were 22,265 auto mechanic businesses in Florida, IBISWORLD, <https://www.ibisworld.com/industry-statistics/number-of-businesses/auto-mechanics-in-florida-united-states> (last visited Oct. 25, 2022), and 7119 auto body businesses in Florida, IBISWORLD, <https://www.ibisworld.com/us/industry/florida/car-body-shops/12653/> (last visited Oct. 25, 2022).

37. Things are quite different when it comes to guns and gunsmiths in early America. Gunsmiths are easy enough to find in the archives of individual colonies, and routinely advertised their services in colonial newspapers. For example, Henry Deabarear informed his customers in Pennsylvania that “he follows his usual business, such as gun work and spring lancet making, likewise cupping spring and teeth instruments.”⁵⁶ Thomas Tew, in his shop on Broad Street in Newport, boasted that he “cleans and repairs GUNS, and GUN-LOCK in the best and most expeditious manner.”⁵⁷ In New York, Gilbert Forbes made and sold “all Sorts of GUNS, in the neatest and best Manner, on the lowest Terms.”⁵⁸ Nathaniel and Joseph Cranch, “Ironmongers & Gunsmiths” located in south Boston, sold imported arms, barrels, and locks, and advertised “Guns and Pistols repair’d and clean’d.”⁵⁹ John Page, who moved from London to Preston, Connecticut, let New Englanders know that he “makes and repairs all Kinds of Pistols, Muskets, and Blunderbuses, in the most neat and durable Manner, upon the most reasonable Terms.” Page also made braces, “for those afflicted with Ruptures.”⁶⁰

38. While anecdotal evidence of gunsmithing is common, assessing the role colonial gunsmiths played in arming British North America is a challenge. For one thing, historians disagree about the number of gunsmiths active in the colonies. Experts have advanced wildly

⁵⁶ PENNSYLVANIA GAZETTE (Sept. 15, 1773).

⁵⁷ NEWPORT MERCURY (June 26, 1775).

⁵⁸ NEW YORK JOURNAL (May 25, 1775).

⁵⁹ BOSTON GAZETTE (Nov. 29, 1773).

⁶⁰ NORWICH PACKET (Mar. 23, 1775).

diverging estimates, ranging from 175⁶¹ to nearly 2000⁶² working in the thirteen colonies on the eve of the Revolution.

39. Impoverished terminology presents an even bigger challenge. As the advertisements above suggest, a single term covered a wide range of expertise. Though this varying expertise existed across a spectrum, it clustered into three basic groups. Those able to repair firearms were called “gunsmiths.” Those capable of not just repairing but also building firearms from a mix of self-made and imported parts were known as “gunsmiths.” And those with the skills, tools, materials, and inclination necessary to manufacture guns entirely from components of their own making were called “gunsmiths.”

40. The looseness of the term is both an obstacle to genuine understanding and a helpful screen for the motivated argument that early America had a widespread tradition of self-made arms. A closer consideration of each of the three, overlapping sub-groups of gunsmiths makes it plain, though, that only a small percentage of them were in the business of making their own arms.

41. The first group, repairers of firearms, vastly outnumbered the rest. Given that guns were so common, so important, and so easily damaged or worn out, and given the impracticality of sending defective arms back to Europe to be fixed, artisans capable of repairing arms had a steady clientele throughout the colonies. Many things could go wrong

⁶¹ ROBERT F. SMITH, MANUFACTURING INDEPENDENCE: INDUSTRIAL INNOVATION IN THE AMERICAN REVOLUTION 12 (2016).

⁶² BROWN, *supra* note 29, at 404–09. Brown’s appendix lists the names of approximately 500 people involved in manufacturing war material for the revolutionary war effort, though this number includes many who made musket balls, bayonets, wire brushes, etc. Brown estimates the total number of gunsmiths active during the Revolution to be less than two thousand. *Id.* at 347.

with muskets; even more so with the relatively light and inexpensive firearms that predominated in early America.⁶³ Nearly any component of a firearm could need repairing or replacing after a few years of hard use or inattention. Inventories of guns stored by colonial governments frequently listed as many as a quarter, a third, or even higher fractions out of repair.⁶⁴

42. For one unusually-well documented gunsmith in eighteenth century North America, the most common work was replacing or repairing (casehardening) frizzens and hammers that had grown too soft through overuse. Missing screws also needed attending to, barrels straightened, cracked butts restocked, broken breech plugs refashioned, and springs replaced.⁶⁵ Any of these mishaps or a dozen others could render a firearm into little more than an expensive club. As one observer put it regarding Indian trade guns, “the breaking a Spring or a gunlock etc. may be the means of destroying a whole Seasons Hunt and of distressing and Starving a numerous Family.”⁶⁶ Late-eighteenth century gunsmith John Anderson from Williamsburg, Virginia, seems to have been typical. His account books reflect a craft business oriented almost entirely to repairs, and they contain no evidence that he made even a single firearm prior to the American Revolution.⁶⁷ Greenlee lists numerous examples of

⁶³ The Creek leader Alexander McGillivray offered a glimpse into the expected durability of lighter firearms in 1789 when he requested “English Trading Guns which are Good and will last more than two Years in Constant Use.” See Letter from Alexander McGillivray to William Panton, Little Tallassie (Feb. 1, 1789), in JOHN WALTON CAUGHEY, MCGILLIVRAY OF THE CREEKS 215–20 (1938).

⁶⁴ BAILEY, *supra* note 32, at 105–06.

⁶⁵ Kevin Paul Jones, *An Examination of Flintlock Components at Fort St. Joseph (20BE23)*, Niles, Michigan 17, 29–30 (2019) (unpublished M.A. thesis, Western Michigan University).

⁶⁶ *Plan of Robert Rogers, 1767*, in WILLIAM JOHNSON, THE PAPERS OF SIR WILLIAM JOHNSON, VOL. 13, 453 (Alexander C. Flick ed., 1921).

⁶⁷ HAROLD B GILL, THE GUNSMITH IN COLONIAL VIRGINIA 22–27, 64–68 (1974). Cited in the Expert Report and Declaration of Kevin M. Sweeney at 6 n.10, Nguyen et al., v. Bonta et al., No.

early Americans in other craft professions working part-time as “gunsmiths” for extra income.⁶⁸ The intended implication here is that the craft was not only very widespread but also relatively easy to learn. But insofar as the farmers, carpenters, cutlers, stone masons, and attorneys (yes, attorneys) he mentions moonlighted with gunsmithing, they almost certainly were dabbling in this first, largest, and least-skilled category of “gunsmith” focused on repairs.

43. A second, smaller cohort of gunsmiths had experience making firearms with a mix of self-made components and imported locks and/or barrels. Colonial newspapers routinely note the importation of locks⁶⁹ and barrels.⁷⁰ It is hardly surprising that colonial gunsmiths would welcome the outsourcing of the most technically complex and consequential parts of a firearm. Most would have worked with imported locks and/or barrels because they lacked the expertise to make them, or at least make them well. Others with the requisite skill often relied on imported parts because it was more economical to do so, or because essential tools or materials were lacking. Steel for the springs in gunlocks was particularly difficult to produce in early America and only imported at great expense.⁷¹

44. Even the era’s most distinctive and developed American arms-making tradition production of the American long rifle (also known as the Kentucky-, Lancaster-, or

3:20-cv-02470-WQH-BGS (S.D. Cal.).

⁶⁸ Greenlee, *supra* note 17, at 66-68.

⁶⁹ During the 1750s and 1760s in the *Pennsylvania Gazette* alone, merchants advertised gunlocks on July 16, 1752; May 10, 1753; Feb. 11, 1755; Feb. 5, 1756; March 11, 1756; Jan 5, 1758; March 8, 1759; Jan. 3, 1760; Jan. 9, 1766; and July 20, 1769.

⁷⁰ Consider the following examples from a ten-year period in a single colony: NEW YORK GAZETTE (Nov. 8, 1762), NEW YORK GAZETTE (Mar. 4, 1765), NEW YORK JOURNAL (Nov. 27, 1766), NEW YORK GAZETTE OR WEEKLY POST-BOY (Oct. 24, 1768), NEW YORK GAZETTE AND WEEKLY MERCURY (Mar. 16, 1772), NEW YORK JOURNAL OR THE GENERAL ADVERTISER (June 11, 1772).

⁷¹ On the scarcity of steel for gun-springs as a particular impediment to the colonial arms industry, see BROWN, *supra* note 29, at 243-44.

Pennsylvania-rifle), usually relied on imported English or German locks.⁷² American-rifles were prized for their well-made barrels, and specialists in that tradition were using increasingly sophisticated production methods by the second half of the eighteenth century.⁷³ But as for typical fowling pieces or muskets, consumers would have more confidence in the integrity of imports because, unlike those made in America, imported barrels had been manufactured under a demanding system of regulations and had almost always undergone proof.⁷⁴

45. How analogous were these imported locks and barrels to the components and kits used to assemble ghost guns in our own times? Consider the distance the new eighteenth-century owner of a lock and barrel would have to travel before they would have a reliable firearm to shoot. A functional wooden stock would have to be made, a task requiring woodworking tools and expertise. Numerous additional parts would have to be made or purchased, including a butt-plate, side-plate, trigger, trigger guard, trigger plate, trigger pivot, escutcheon, ramrod, ramrod pipes, furniture-fastening cross-pins, and a variety of metal and wood screws.⁷⁵ There were no parts kits in early America, so all of this would have to have been made or acquired *à la carte*. One of the reasons there were no parts kits is that firearms were not yet built with interchangeable parts. Quite unlike the “incredibly precise” machine-made interchangeable parts advertised by today’s ghost-gun entrepreneurs, eighteenth-

⁷² *Id.* at 268.

⁷³ Carlton O. Wittlinger, *The Small Arms Industry of Lancaster County: 1710-1840*, 24 PENNSYLVANIA HISTORY: A JOURNAL OF MID-ATLANTIC STUDIES 121, 135–36 (1957).

⁷⁴ BROWN, *supra* note 29, at 150.

⁷⁵ BAILEY, *supra* note 32, at 95–96.

century components were almost all made by hand.⁷⁶ The resulting variability in the size, shape, thickness, and quality of individual parts required significant time and skill on the part of the person charged with turning them into a reliable firearm. Parts often had to be filed, fitted, re-filed, and re-fitted before they could be put into harmony with one another, and particular care had to be taken mounting the barrel and the lock to the stock.⁷⁷ Needless to say, all of this had to be done without PDF instructions or how-to videos. This was not the work of amateurs. Gunsmiths capable of building firearms with imported locks and/or barrels were skilled professionals and were compensated as such.

46. Colonial Americans who made their own firearms from scratch belonged to the third and smallest cohort of gunsmiths. Unlike the European system characterized by complex division of labor, gun-makers in the colonies usually worked alone or in pairs in small shops. That meant that in addition to an unusually wide range of skills, such producers needed an unusually large collection of materials and tools. They needed iron, copper, and steel; bellows, forges, anvils, and sledges; hammers and mallets of different shapes, materials, and sizes; a remarkable array of files (one eighteenth-century gunsmith's inventory includes twenty-nine types); rasps, saws, planes, hand- and table-VICES, wrenches, swedges, screwdrivers, piers, pincers, tongs, drills, chisels, gouges, screw-plates, augers, drawing knives, and sandpaper; and mortars, pestles, and the necessary components for browning chemicals, among other necessities.⁷⁸

⁷⁶ See the tab "incredibly precise" at [HTTPS://WWW.80PERCENTARMS.COM/](https://www.80percentarms.com/), last accessed Sept. 28, 2023.

⁷⁷ BAILEY, *supra* note 32, at 96-98. See also Jones, *supra* note 65 at 15.

⁷⁸ For tools, see BROWN, *supra* note 29, at 244-57; JAMES B. WHISKER, THE GUNSMITH'S TRADE 180-85 (1992).

47. Mobilizing the requisite skills and equipped with these and other requisite materials and tools, it would have taken an early American gunsmith around a week of work to produce a basic, utilitarian longarm from scratch.⁷⁹ Anything elaborate or ornate would have taken considerably longer. A recent study concluded that individual rifle-makers in southeastern Pennsylvania produced no more than thirty rifles a year.⁸⁰ Evidence from the time suggests that even those capable of building guns from scratch seldom did so. John Partridge Bull of Deerfield, Massachusetts, was one of those unusual gunsmiths who knew how to make firearms from scratch and had the materials, facilities, and tools to do so. Bull is even more unusual because he left behind a detailed account book recording the work he did over two decades as a gunsmith, 1768-1788. It reveals that he made just three new guns during those twenty years.⁸¹

48. In sum, early America had a minor, low-productivity tradition of firearms manufacturing, one executed by a small number of experts. Sometimes these experts made firearms for their own private use. Everyone else used guns made by experts, overwhelmingly by Europeans. The vast majority of guns in the colonies came from Europe; repairs consumed the vast majority of work done by American gunsmiths; and of those firearms built in America, the vast majority featured European locks and barrels.

/ / /

⁷⁹ SMITH, *supra* note 39, at 11.

⁸⁰ ALEXANDER ROSE, AMERICAN RIFLE: A BIOGRAPHY 21 (2008).

⁸¹ Susan McGowan, *Agreeable to His Genius: John Partridge Bull (1731-1813), Deerfield, Massachusetts* 5, 39-40, 74-75 (1988) (unpublished M.A. thesis, Trinity College).

A.7 Colonists Could Not Make the Arms They Needed in Times of Crisis

49. Still, some might concede these basic facts and still insist upon a “tradition of self-made arms” in the colonies. Maybe this was a tradition of significant latent potential, potential kept slumbering by the competitive advantage of European manufacturing. So long as Europe turned out huge quantities of quality, affordable barrels and locks, one could argue, American gunsmiths rarely had cause to make them at home – *but they could have, if need be.* That is certainly what one would expect if, as Greenlee insists, there had been a robust American tradition of self-made arms.

50. The trouble with this interpretation is that the colonies did sometimes find themselves under-armed at moments of crisis, and yet domestic manufacturing consistently failed them. Consider “the great arms crisis” of 1758, during the Seven Years’ War.⁸² Early that year, London had called for 20,000 men from the colonies to be mobilized for the coming campaign against French forces and their Indigenous allies in North America. Secretary of State William Pitt had vaguely promised that the metropole would equip all these men, too few of whom were able or willing to supply their own arms.⁸³ But it soon became clear that only 10,000 muskets could be shipped across the Atlantic in time for the campaign, and that even these might not arrive in time. This set off a frantic scramble for firearms throughout British North America. General James Abercromby, responsible for the coming campaign, spent all spring and early summer imploring, cajoling, and bullying colonial governors to secure guns for the new recruits. With varying degrees of enthusiasm and sincerity, the

⁸² BAILEY, *supra* note 32, at 121.

⁸³ John A. Schutz, *The Disaster of Fort Ticonderoga: The Shortage of Muskets during the Mobilization of 1758*, 14 HUNTINGTON LIB. Q. 307–09 (1951).

governors attempted to comply. They grudgingly loaned out arms from public magazines, appealed to loyal subjects to contribute to the cause, and recruited the help of Thomas Hancock and other prominent merchants. These merchants eventually managed to purchase guns from market-savvy colleagues who had placed bulk orders with English gun dealers at the start of the war in anticipation of reaping handsome profits (foresight that was well-rewarded).⁸⁴ What no one seems to have seriously attempted, or even to have to have imagined would be worth attempting, was mobilizing British North America's "tradition of self-made arms" to manufacture the guns the recruits required. Insofar as American gunsmiths helped solve the crisis, it was through repairs - making defective arms fit for service.⁸⁵ Delayed six weeks by the maddening search for firearms, Abercromby arrived too late at Ticonderoga and suffered one of Britain's most humiliating defeats of the war.⁸⁶

51. Or consider "Lord Dunmore's War" in 1774. In the fall of that year, Virginia's royal governor led militiamen from the colony's western counties in a war of conquest against the Shawnee in the Ohio Country. Though relatively small-scale (battles involving hundreds rather than thousands of combatants), this little-known event was enormously consequential. By forcing the defeated Shawnee to surrender their claim on Kentucky, Dunmore and his forces dramatically accelerated the colonization of the trans-Appalachian West.⁸⁷ Settlers

⁸⁴ *Id.* at 309–12. See also BAILEY, *supra* note 32, at 121–23.

⁸⁵ SCHUTZ, *supra* note 83, at 314.

⁸⁶ Schutz argues that lack of muskets was "the most important cause of the defeat." *Id.* at 307. For the defeat in context, see FRED ANDERSON, CRUCIBLE OF WAR: THE SEVEN YEARS' WAR AND THE FATE OF EMPIRE IN BRITISH NORTH AMERICA: 1754–1766 (2000).

⁸⁷ For Lord Dunmore's War, see RICHARD WHITE, THE MIDDLE GROUND: INDIANS, EMPIRES, AND REPUBLICS IN THE GREAT LAKES REGION: 1650–1815 362–65 (1991); ROB HARPER, UNSETTLING THE WEST: VIOLENCE AND STATE BUILDING IN THE OHIO VALLEY 46–66 (2018); JAMES CORBETT DAVID, DUNMORE'S NEW WORLD: THE EXTRAORDINARY LIFE OF A ROYAL GOVERNOR IN REVOLUTIONARY AMERICA—WITH JACOBITES, COUNTERFEITERS, LAND SCHEMES, SHIPWRECKS, SCALPING, AND TWO ILLEGAL

eagerly volunteered for militia duty, out of a mix of anxious dislike of the Shawnee, expectation of plunder, and hope of receiving land bounties. Where would their guns come from? Reading Greenlee, one would conclude that these resourceful backcountry folk simply made their own guns. As for the “pioneers, mountain men, and other explorers essential to the expansion of the American empire from sea to shining sea,” he tells us, “they had to know how to build and repair arms themselves to survive.”⁸⁸ The frontier leaders tasked with organizing militias understood the situation better. As one local recruiter put it, “most of these men is bad off for arms and ammunition and I believe Cannot get them.”⁸⁹ Facility with basic repairs was obviously a welcome skill. But a little reflection on the great difficulties involved in building firearms even in well-supplied eastern seaports ought to be enough to disabuse anyone of the notion that the average western settler had the necessary materials, facilities, tools, and skills to make his own musket. Dunmore’s forces won a narrow victory over Shawnees not because of a tradition of self-made arms, but because the state had provided English-made guns (and ammunition) for unarmed militiamen from the governor’s palace and colonial magazine in Williamsburg.⁹⁰

52. The scale and logistical challenge of Abercromby’s or Dunmore’s campaigns obviously paled in comparison to what the colonies would soon be facing in the Revolutionary War. Indeed, the revolution represented the perfect natural experiment to test the proposition that early Americans nurtured a robust tradition of self-made arms. War with Britain would make it existentially necessary for insurgents to acquire many tens of

ROYAL WEDDINGS 73–93 (2013).

⁸⁸ Greenlee, *supra* note 17, at 68.

⁸⁹ Letter from Michael Woods to William Preston (May 29, 1774), in DOCUMENTARY HISTORY OF DUNMORE’S WAR: 1774 397–98 (Reuben Gold Thwaites & Louise Phelps Kellogg eds., 1905), 397–98.

⁹⁰ For guns and ammunition sent from the mansion and magazine, see JOURNALS OF THE HOUSE OF BURGESSES OF VIRGINIA 1773–1776, INCLUDING THE RECORDS OF THE COMMITTEE OF CORRESPONDENCE 223 (John Pendleton Kennedy ed., 1905).

thousands of additional firearms. Would “the American tradition of self-made arms” be up to the challenge?

A.8 At No Point Did the American Revolution Rely on Self-Made Firearms

53. At the end of 1774, before Lexington and Concord made war with Great Britain a reality rather than a frightening possibility, one informed skeptic asked his more pugilistic American contemporaries an urgent question: “is it possible that a people without arms, ammunition, money, or navy, should dare to brave a nation, dreaded and respected by all the powers on earth?”⁹¹ Possible, yes. But how? How could an American insurgency arm itself against such a mighty enemy?

54. Greenlee’s surprising answer is domestic production. “To sustain themselves against a large and well-supplied British military throughout the eight-year war,” he writes, “the Americans relied on gunsmiths, individuals with knowhow from working on their own arms, and Americans who were willing to learn the art of arms manufacturing.”⁹² Indeed, he insists that during the Revolutionary War “Americans needed to build their own arms to survive.”⁹³ This answer is surprising because it is at odds with what most professional historians know about the war. The evidence makes it clear that American arms makers were not remotely up to the challenge of equipping a war against Great Britain. Were it not for massive imports of firearms (and gun parts, and saltpeter, among many other things) from continental Europe, the insurgency against Great Britain would have been a spectacular failure.

⁹¹ Extract of a letter from Newport (Dec. 14, 1774), published in the NEW YORK GAZETTEER (Dec. 29, 1774), in NAVAL DOCUMENTS OF THE AMERICAN REVOLUTION, VOL. 1, 20 (William Bell Clark ed., 1964).

⁹² Greenlee, *supra* note 17, at 51.

⁹³ *Id.* at 48.

55. Patriot leaders hoped things would be otherwise at the dawn of the rebellion, and confidently boasted that they could build their way out of their arms shortage. Benjamin Franklin wrote that with the right incentives “arms may be made as good and as cheap in America as in any Part of the World.”⁹⁴ John Adams claimed that his country had “many manufacturers of firearms now, whose arms are as good as any in the world.”⁹⁵ John Hancock believed that the colonies’ gunsmiths would “soon be able to provide” the necessary firepower.⁹⁶ And Thomas Paine informed readers of *Common Sense* of cannon cast “at pleasure” and American small arms “equal to any in the world.”⁹⁷ Richard Penn, a former lieutenant governor of Pennsylvania and the man whom the Continental Congress entrusted to deliver the “olive-branch petition” to the King in the summer of 1775, warned parliament that the colonies made small arms “in great numbers, and very complete.”⁹⁸ Another correspondent from Philadelphia went even further, assuring parliament that there were gunsmiths in his province could “make one hundred thousand stand of Arms in one year.”⁹⁹

56. Even accounting for optimistic bravado and a degree of menacing boastfulness, American officials had ambitious, sincere hopes for domestic arms production. Provincial

⁹⁴ Letter from Benjamin Franklin to Silas Deane (Aug. 27, 1775), available at <https://founders.archives.gov/?q=joseph%20belton&s=1111311111%20&sa=&r=1&sr=> (last visited Jan. 25, 2023)

⁹⁵ John Adams, *Novanglus III* (Feb. 6, 1775), in PAPERS OF JOHN ADAMS, VOL 2 243–55, 252 (Robert J Taylor et al., eds., 1977).

⁹⁶ Letter from John Hancock to George Washington (Mar. 6, 1776), in THE PAPERS OF GEORGE WASHINGTON DIGITAL EDITION (Theodore J. Crackel, ed., 2008).

⁹⁷ THOMAS PAIN, RIGHTS OF MAN, COMMON SENSE, AND OTHER POLITICAL WRITINGS 41 (Mark Philp ed., 1998).

⁹⁸ Penn’s testimony is in WILLIAM COBBETT, THE PARLIAMENTARY HISTORY OF ENGLAND FROM THE EARLIEST PERIOD TO THE YEAR 1803: FROM WHICH LAST-MENTIONED EPOCH IT IS CONTINUED DOWNWARDS IN THE WORK ENTITLED “THE PARLIAMENTARY DEBATES,” VOL 18, 913 (1814).

⁹⁹ Quoted in Greenlee, *supra* note 17, at 55.

congresses from around the colonies passed legislation and issued appeals in hopes of recruiting gunsmiths and would-be gunsmiths to public service. Greenlee devotes several pages of his article to quoting these sources,¹⁰⁰ as do Plaintiffs in their complaint.¹⁰¹ But neither Greenlee nor the Plaintiffs have anything to say about the *results* of revolutionary-era appeals for domestic production of firearms.¹⁰² The silence is understandable, because those results were deeply underwhelming.

57. Take Massachusetts, which budgeted nearly \$100,000 to pay for domestically produced war material early in the conflict. Colonial craftsmen lacked the capacity to meet this surging demand, and much of that appropriation went unspent.¹⁰³ Authorities in Maryland likewise worked to encourage domestic arms production. They set a relatively modest goal of producing 240 a month and failed to achieve it.¹⁰⁴ New York offered a bounty of \$444 to anyone willing to start a gunlock factory in the colony; that substantial bounty went unclaimed and the colony was reduced to sending George Washington unarmed recruits.¹⁰⁵ Virginians had high hopes for domestic firearms production, but even after sending agents in search of gunsmiths far beyond their colony's borders they failed to secure the arms they

¹⁰⁰ *Id.* at 55-60.

¹⁰¹ *Supra*, note 2, at 46-49.

¹⁰² Greenlee claims that it is difficult to assess the scale of domestic firearms production during the war because, fearful of British retaliation, American gunsmiths did not sign their creations. *Id.* at 60. This is incorrect. In the first instance, archival evidence can tell us more about the scale of manufacturing than can examination of weapons that have survived the centuries. Second, some of the surviving guns do bear makers' signatures or insignia. Indeed, authorities sometimes required gunmakers to sign the firearms they produced under contract. See BROWN, *supra* note 29, at 325; NEIL LONGLEY YORK, MECHANICAL METAMORPHOSIS: TECHNOLOGICAL CHANGE IN REVOLUTIONARY AMERICA 65 (1985).

¹⁰³ SMITH, *supra* note 61, at 9-10.

¹⁰⁴ *Id.* at 10.

¹⁰⁵ *Id.*

themselves required.¹⁰⁶ Wealthy Pennsylvania organized the most ambitious arms-making program of the individual colonies. It spent more than other colonies, and tried to centralize production in a new, \$100,000 state-run armory inspired by European methods of mass production. Yet even with their lucrative incentives and state-supported infrastructure, Pennsylvania's wartime gunsmiths only managed to produce around eighty-four muskets a month on average. Each one cost the state about twice as much as a new musket fetched on the open market.¹⁰⁷

58. In frustration, individual colonies looked to the Continental Congress to equip their fighting men. Though it took time to cohere, Congress eventually organized a very impressive system of wartime production. State intervention was crucial, because only the government could overcome systemic obstacles inhibiting production. Even in peacetime, private manufacturers struggled to obtain working capital, master unfamiliar technical skills, source and arrange for the timely transportation of raw materials, and recruit experienced labor. Wartime mobilization, disruption, scarcity, and inflation made all these routine problems dramatically worse.¹⁰⁸ The Department of the Commissary General of Military Stores (DCGMS) had solutions. It provided cash advances, raw materials, transportation, and technical consulting to private manufacturers working under contract. More consequentially, the DCGMS centralized production at three main national arsenals, at Springfield Massachusetts, Carlisle Pennsylvania, and Philadelphia.¹⁰⁹

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 15, 222 n.41. For the efforts of individual colonies, see also YORK, *supra* note 102, at 65–70.

¹⁰⁸ See BROWN, *supra* note 29, at 310.

¹⁰⁹ SMITH, *supra* note 61, at 142–71.

59. State contractors and master craftsmen at these arsenals coordinated specialists in multiple trades to mass-produce necessary military supplies. For some vital supplies, the results were remarkable. Among other items, they made large quantities of cartridge boxes, ramrods, bayonets, and cartridge paper. They produced hundreds of wagons, ammunition carts, and iron cannon.¹¹⁰ The cast tens of thousands of pieces of shot and artillery shells in a wide range of sizes.¹¹¹ And, relying overwhelmingly on imported gunpowder or domestic powder made with imported saltpeter, the mostly female labor force at the ammunition laboratory in Philadelphia produced an astonishing 4.2 million musket cartridges.¹¹²

60. What the DCGMS could not do, it became clear, was manufacture new firearms at anywhere near the scale that the war demanded. The most recent expert estimate suggests that on the eve of the revolution there were only around 175 gunsmiths in the colonies capable of doing this work.¹¹³ Perhaps partly for this reason, of the three arsenals only the one in Philadelphia was tasked with producing arms. Departmental procurement records from the time make it difficult to say with confidence how many new firearms the facility turned out. One expert suggests that fifteen thousand “was not out of the question” during its years of operation, which, if accurate, would be an impressive figure given the challenges of the day.¹¹⁴

¹¹⁰ *Id.* at 122, 193.

¹¹¹ *Id.* at 123–26, 209.

¹¹² *Id.* at 82–88. Government facilities made eleven million musket cartridges overall. *Id.* at 209.

¹¹³ *Id.* at 12.

¹¹⁴ *Id.* at 96.

61. But the large majority of these American-made firearms produced during the revolution relied on European locks and barrels. War planners understood from the beginning that it would have to be so. In September 1775, for example, Congress authorized the foreign purchase and importation of ten thousand muskets and *twenty* thousand musket locks.¹¹⁵ The firearms historian George Moller found evidence for at least 40,000 locks imported during the Revolution, along with comparable quantities of musket barrels (including nearly 30,000 in a single shipment in May of 1777).¹¹⁶ The scale of these parts imports suggest that the expert gunsmiths employed by government seldom made firearms from scratch. Indeed, after extensive research, Moller himself was “unable to establish a single instance where a continental armorer was employed in the fabrication of entirely new arms.”¹¹⁷

62. Even while relying almost entirely on imports for the most critical components, it is doubtful whether domestic producers made even a tenth of the firearms used by American forces during the war. Around three hundred thousand Americans bore arms in the Revolution, either as Continentals or militiamen.¹¹⁸ Some of them entered the service with their own firearm (the great majority of which had been made entirely in Europe or built with European locks and barrels), and some served with arms taken from the enemy.¹¹⁹ But, as

¹¹⁵ See resolutions of Monday, Sept. 18, 1775, in UNITED STATES CONTINENTAL CONGRESS, JOURNALS OF THE CONTINENTAL CONGRESS, 1774-1789, EDITED FROM THE ORIGINAL RECORDS IN THE LIBRARY OF CONGRESS, VOL. 2 253-54 (Worthington Chauncey Ford ed., 1904).

¹¹⁶ GEORGE D. MOLLER, AMERICAN MILITARY SHOULDER ARMS I: COLONIAL AND REVOLUTIONARY WAR ARMS, 141-42 (2011).

¹¹⁷ *Id.* at 147.

¹¹⁸ According to historian John Ferling, around 100,000 served in the Continental Army over the course of the war, and around 200,000 soldiered in colonial militias. See John Ferling, *Myths of the American Revolution*, SMITHSONIAN MAGAZINE 48 (2010).

¹¹⁹ For more on both points, see Brian DeLay, *The Arms Trade and American Revolutions*, 128:3 AM. HIST. REV. 1144-1181 (Sept. 2023).

Greenlee briefly acknowledges,¹²⁰ most fought with arms imported from continental Europe, particularly arms from France. Moller's careful inventory records more than 150,000 muskets imported between 1776-1781, and he suspects the actual total exceeded 200,000.¹²¹

63. In other words, it was not "domestic arms production [that] maintained the colonies through the arms shortage during the war," as Greenlee argues.¹²² What maintained the colonies through the arms shortage during the war was a remarkable state-run engagement with the international arms trade and, especially, the patronage of European empires. Colonial gunsmiths contributed meaningfully to the war effort, primarily by repairing many thousands of arms.¹²³ When they did manufacture guns, they almost always relied on imported locks and barrels. As had been true throughout the colonial era, and as would be true for Haitians and Spanish Americans fighting for their own independence in the coming decades, American revolutionaries obtained their guns (and ammunition) not through a "tradition of self-made arms," but rather from government and markets.¹²⁴

A.9 America Only Developed a Productive Firearms Industry after 1791, and It Was Led by the State

64. In the decade after Independence, prominent nationalists argued that the new republic's future security and prosperity would require the construction of a viable domestic

¹²⁰ Greenlee, *supra* note 17, at 54.

¹²¹ MOLLER, *supra* note 116, at 195. The 150,000 figure begins with his list of 117,661 "total known imports" from 1776-1883, adds an additional 40,000 sent for Massachusetts and subtracts a shipment of 6,266 in 1783, after the North American fighting had ended. *Id.* appendix 5, at 484-85.

¹²² Greenlee, *supra* note 17, at 61.

¹²³ MOLLER, *supra* note 116, at 146-53.

¹²⁴ I argue that the international arms trade connected the American Revolution, the Haitian Revolution, and the Spanish-American Wars for Independence in DeLay, *supra* note 119.

arms industry. In 1783, a report from the Continental Congress warned that “every country ought to endeavor to have within itself all the means essential to its own preservation, as to depend on the casualties of foreign supplies is to render its own security precarious.”¹²⁵ Secretary of War Benjamin Lincoln called it “idle for a people to talk of Independence who were indebted for the means of their existence to any nation on Earth.”¹²⁶ In Washington’s first inaugural address, he argued that a free people’s “safety and interest require that they should promote such manufactoryes as tend to render them independent on others, for essential, particularly for military supplies.”¹²⁷ And in his landmark “Report on the Subject of Manufactures,” Treasury Secretary Alexander Hamilton advocated for state-supported arms production. “The extreme embarrassments of the United States during the late War, from an incapacity of supplying themselves,” he reminded a Congress full of men that did not need reminding, “are still matter of keen recollection.”¹²⁸

65. Government penury and the broader postwar depression meant that these and similar calls to action long went unanswered. Not only did the newly independent nation lack the resources to fund domestic arms production; it lacked the funds even to properly store what was already on hand. Lamenting the unavoidable necessity, the war department

¹²⁵ Andrew Beardsley Fagal, *The Political Economy of War in the Early American Republic: 1774–1821* 89 (2013) (unpublished Ph.D. dissertation, State University of New York at Binghamton).

¹²⁶ *Id.* at 70–71.

¹²⁷ Letter from George Washington to the United States Senate and House of Representatives (Jan. 8, 1790), available at <https://founders.archives.gov/?q=From%20George%20Washington%20to%20the%20United%20States%20Senate%20and%20House%20of%20Representatives%2C%208%20January%201790&s=1111311111&sa=&r=5&sr=> (last visited June 20, 2023).

¹²⁸ Alexander Hamilton’s Final Version of the Report on the Subject of Manufactures (Dec. 5, 1791), available at <http://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007> (last visited June 20, 2023).

auctioned off much of the war material left over from the Revolutionary War.¹²⁹ Knox insisted that a “sound national policy” would secure at least 100,000 muskets in national arsenals.¹³⁰ But by the end of 1793 he reported that the arsenals contained fewer than half than number, and that a third of those needed repair.¹³¹

66. As had been true throughout the colonial era, the opportunities and threats that attended slavery, settler colonialism, and inter-imperial conflict pushed government to overcome obstacles and arm the nation. Increasingly anxious over a surging enslaved population, southern states wondered where they would obtain the arms necessary to keep them in bondage. Asking “[a]re we not weakened by the population of those whom we hold in slavery?” the governor of Virginia argued for example that his state would have to depend on the federal government for firearms.¹³² In the Ohio country, a dynamic coalition of Indigenous nations armed with British guns and ammunition inflicted a series of shocking defeats on U.S. armed forces during the late 1780s and early 1790s.¹³³ News in late 1791 that Native warriors had killed or wounded two-thirds of an 1400-man army led by General Arthur St. Clair was particularly humiliating for the Washington administration.¹³⁴ But the scandal gave the

¹²⁹ See, e.g., Letter from Henry Knox to the President of Congress, War Office (Aug. 1, 1786), in UNITED STATES CONTINENTAL CONGRESS, *supra* note 115, VOL. 31 457–58.

¹³⁰ Letter from Henry Knox to George Washington (Dec. 14, 1793), available at <https://founders.archives.gov/documents/Washington/05-14-02-0342> (last visited June 20, 2023).

¹³¹ Henry Knox, *Return of Ordnance, Arms, and Military Stores* (Dec. 14, 1793), in AMERICAN STATE PAPERS: MILITARY AFFAIRS, VOL. 1 44–60 (1832).

¹³² Speech of Gov. Randolph (June 16, 1788), in JONATHAN ELLIOT, THE DEBATES IN THE SEVERAL STATE CONVENTIONS ON THE ADOPTION OF THE FEDERAL CONSTITUTION VOL. 3 72 (1888).

¹³³ See COLIN G. CALLOWAY, THE VICTORY WITH NO NAME: THE NATIVE AMERICAN DEFEAT OF THE FIRST AMERICAN ARMY (2014).

¹³⁴ *Id.* at 129–39.

president and his allies leverage they needed to finally secure congressional funding to initiate an arms production program.¹³⁵ When the U.S. drifted into the “Quasi-War” with France a few years later, funding for that program increased significantly.¹³⁶

67. Though it took longer than nationalists had hoped, by the late 1790s the infant U.S. arms industry was increasingly productive. The federal government itself was making firearms at two national armories, at Springfield Massachusetts and Harper’s Ferry, Virginia. Springfield used the French Model 1766 musket (easily the most common weapon in government arsenals) as a prototype.¹³⁷ Springfield especially became an innovative center for machine production and standardized parts. The War Department also contracted out with private manufacturers. Some of these contractors made component parts for the arsenals, while Eli Whitney and others made muskets, pistols, and rifles to government specification.¹³⁸ When the Jeffersonians came to power after the 1800 election, they put more of the emphasis (and the budget) on funding private manufacturers.¹³⁹ In addition to lucrative contracts, the federal government extended startup capital;¹⁴⁰ shared patterns, gauges, dies, tools, and technical advice from arsenal staff;¹⁴¹ and took steps to protect domestic

¹³⁵ Fagal, *supra* note 125, at 144–52.

¹³⁶ For instance, on May 4, 1798, Congress appropriated \$800,000 for the procurement of cannon, arms, and ammunition. See THE PUBLIC STATUTES AT LARGE OF THE UNITED STATES OF AMERICA 1:555 (1845).

¹³⁷ GEORGE D. MOLLER, AMERICAN MILITARY SHOULDER ARMS II: FROM THE 1790S TO THE END OF THE FLINTLOCK PERIOD 33 (2011).

¹³⁸ LINDSAY SCHAKENBACH REGELE, MANUFACTURING ADVANTAGE: WAR, THE STATE, AND THE ORIGINS OF AMERICAN INDUSTRY, 1776–1848 53–56 (2019).

¹³⁹ FAGAL, *supra* note 125, at 189–247.

¹⁴⁰ *Id.* at 232–33.

¹⁴¹ GARAVAGLIA & CHARLES G. WORMAN, FIREARMS OF THE AMERICAN WEST: 1803–1865, 20 (1998).

manufacturers with high tariffs on arms imports¹⁴² and, eventually, robust patent laws to reward innovation.¹⁴³

68. Together, private contractors and national arsenals proved to be synergistic, innovative, and productive. By 1812, when the United States again went to war with Great Britain and its Indigenous allies, domestic contractors and the federal armories were producing around 60,000 firearms between them each year.¹⁴⁴ Still modest compared to the productive capacity of Europe's great gun-making centers, this nonetheless meant that the U.S. had become an arms producer of significance. And its timing was excellent. The nation had an innovative, growing, state-supported arms industry in place right when firearms technology was about to undergo dramatic changes, where new ideas and designs combined with the industrial revolution to produce waves of transformation through the early twentieth century.¹⁴⁵

69. As president, James Madison instructed his Secretary of War to "lean to the indulgent side" when dealing with the nation's arms manufacturers.¹⁴⁶ The federal government has hewed to this advice ever since. Settler colonialism and wars of conquest against Native nations, the task of keeping millions of people enslaved, and the U.S.-Mexican War all helped nurse the industry to a point of maturity by the mid-nineteenth century.¹⁴⁷

¹⁴² Debate over tariffs and protection for domestic manufacturers is a major theme throughout Fagal, *supra* note 125.

¹⁴³ REGELE, *supra* note 138, at 24-25, 30-32.

¹⁴⁴ Fagal, *supra* note 125, at 245.

¹⁴⁵ For a classic study, see SMITH, *supra* note 39.

¹⁴⁶ Fagal, *supra* note 125, at 241-42.

¹⁴⁷ See Brian DeLay, *The American Public Has Power Over the Gun Business. Why Doesn't it Use it?*, THE CONVERSATION (Feb. 16, 2018), available at <https://theconversation.com/the-american-public-has-power-over-the-gun-business-why-doesnt-it-use-it-92005>.

Then the Civil War supercharged it and helped make it one of the most productive and inventive in the world. Ever since, the U.S. arms industry has been thoroughly entangled with war-making and government contracts – even as the gun lobby has spun the ingenious illusion that the federal government is the industry's enemy rather than its indispensable historic patron.¹⁴⁸

70. In sum, after centuries of depending upon European imports, Americans in the early republic finally managed to become largely self-sufficient in arms production. They did so through federal patronage of production at national arsenals and through federal contracts to private manufacturers. The individuals who worked at arsenals or under contract were not exponents of an “American tradition of self-made arms” or the forbears of today’s amateurs with gun kits trying to evade state regulation. They were professionals or professionals-in-training, working in an industry intimately connected to the state. They were the forebears of those gunmakers employed today by firms like Glock, Sig Sauer, and Smith & Wesson to make arms for the state and for the market, and who are obliged by law to have federal licenses and stamp serial numbers on their products.

B. A.B. 286 Conforms to This Nation’s Historical Tradition of Firearm Regulation

71. From the seventeenth to the twenty-first century, nearly all firearms in America were produced by professional gunsmiths. Government regulation of arms making consisted mostly of various forms of support and incentives designed to encourage production. As guns and gun crime proliferated in the twentieth century, however, government began looking toward more explicit regulation of production and distribution as partial solutions to

¹⁴⁸ *Id.*

concerns over public safety. One important element of this evolution in firearms regulation was the 1968 Gun Control Act's serialization requirement. Hobbyists who made firearms for personal use were exempt from this requirement. But because they had to master a complex craft and acquire a suite of specialized tools, these hobbyists were relatively few and their total production was much too small to generate widespread social problems.

72. Ghost guns are different. The advent and rising popularity of ghost gun kits and 3D-printers has made it possible for amateurs with no skills or special tools to quickly assemble reliable, unserialized firearms. That is something new in American history. A.B. 286 applies a venerable regulatory response to that novelty, insisting that these weapons adhere to serialization requirements that have been an essential tool of American law enforcement for more than half a century. More generally, because the issue it seeks to address is a "dramatic technological change" that has provoked "unprecedented societal consequences," A.B. 286 (and other laws like it) is consistent not just with firearms law since the Johnson administration, but with America's centuries-long history and tradition of firearm regulation. As such, it should satisfy *Bruen's* history and tradition test.

73. Explaining why requires a discussion of the very different context out of which firearms regulation emerged in the colonial and founding eras, and a summary of how and why America's history and tradition of firearms regulation has evolved over time.

B.1 The Differences Between 18th- and 21st-Century Gun Culture

74. Like residents of the United States today, British North Americans owned a lot of firearms. Indeed, compared to most colonists elsewhere around the hemisphere, and compared to their counterparts in Great Britain, white residents of the thirteen colonies were

remarkably well-armed.¹⁴⁹ While there were no comprehensive registries or public surveys of gun ownership in those times, for decades historians have used probate inventories in order to assess the scale of arms ownership in the thirteen colonies. Careful samples of probate inventories from 1774 suggest that on average about half of all white households possessed a firearm.¹⁵⁰ That did not mean that “the gun was more abundant than the tool,”¹⁵¹ but it did mean that the gun was considerably more abundant than the bible.¹⁵²

75. This relative abundance of firearms is an important continuity with our own times. But once we inquire into why early Americans had so many guns, and how those motivations shaped patterns of gun ownership over time, the gulf between then and now comes into view.

76. British North Americans were well-armed for reasons distinct to their times. Whereas our present-day gun culture is consumerist, state-phobic, and individualist, gun culture in eighteenth century British North America was utilitarian, state-led, and collective.

77. Consider some of the features of contemporary gun culture. One of the most prominent is the gun’s association with rural America and with hunting. Here the continuity with the eighteenth century seems strong. In an era where rural farming families comprised

¹⁴⁹ For gun ownership in Britain, see Priya Satia, *Who Had Guns in Eighteenth-Century Britain?*, in *A RIGHT TO BEAR ARMS? THE CONTESTED ROLE OF HISTORY IN CONTEMPORARY DEBATES ON THE SECOND AMENDMENT* (Jennifer Tucker, Barton C. Hacker, & Margaret Vining eds., 2019); see also Kevin M. Sweeney, *Firearms Ownership and Militias in Seventeenth- and Eighteenth-Century England and America*, in *A RIGHT TO BEAR ARMS? THE CONTESTED ROLE OF HISTORY IN CONTEMPORARY DEBATES ON THE SECOND AMENDMENT* 61 (Jennifer Tucker, Barton C. Hacker, & Margaret Vining eds., 2019).

¹⁵⁰ James Lindgren & Justin L. Heather, *Counting Guns in Early America*, 43 WM. & MARY L. REV. 1777, 1780–81 (2002).

¹⁵¹ Greenlee, *supra* note 17, at 46 (quoting CHARLES WINTHROP SAWYER, FIREARMS IN AMERICAN HISTORY 9 (1910)).

¹⁵² Lindgren & Heather, *supra* note 150, at 1800.

around 95% of the colonial population, firearms were useful and sometimes indispensable tools for everyday life.¹⁵³ They were required for fowling or hunting big game, and handy for keeping pests from crops and homes. Guns are obviously put to similar uses in the United States today, but only by a small proportion of the population (14% now live in rural areas, and a mere 4% hunt).¹⁵⁴

78. Another conspicuous feature of our contemporary gun culture is the degree to which arms are prized and heavily-marketed consumer goods.¹⁵⁵ For a small minority of wealthy colonial buyers, finely-made arms could be valued and pleasing material possessions, objects to take care of and even pass down to inheritors.¹⁵⁶ But the extreme rarity in the eighteenth century of the large firearm collections so important to the flourishing of today's gun industry is another metric of discontinuity. A landmark 2016 study from researchers at Harvard and Northeastern University found that today's so-called "super-owners," the three percent of Americans who for reasons of collecting or prepping or both own the most guns, possess roughly half of all privately held firearms in the country.¹⁵⁷

¹⁵³ For rural vs. urban in the 1790 census, see United States Bureau of the Census & Social Science Research Council, *Historical Statistics of the United States: Colonial Times to 1957*, 14 (1975).

¹⁵⁴ For the 2021 rural population, see Elizabeth A. Dobis et al., *Rural America at a Glance: 2021 Edition*, USDA ECONOMIC RESEARCH SERVICE 2 (Nov. 2021). For hunting today, see Andrew Moore, *Decline in Hunting Threatens Conservation Funding*, NC STATE COLLEGE OF NATURAL RESOURCES NEWS (Jan. 27, 2021), available at <https://cnr.ncsu.edu/news/2021/01/decline-in-hunting-threatens-conservation-funding/>.

¹⁵⁵ For recent accounts of the business of marketing and selling firearms in the United States, see RYAN BUSSE, *GUNFIGHT: MY BATTLE AGAINST THE INDUSTRY THAT RADICALIZED AMERICA* (2021); and JENNIFER CARLSON, *MERCHANTS OF THE RIGHT: GUN SELLERS AND THE CRISIS OF AMERICAN DEMOCRACY* (2023).

¹⁵⁶ MICHAEL LENZ, "ARMS ARE NECESSARY": GUN CULTURE IN EIGHTEENTH-CENTURY AMERICAN POLITICS AND SOCIETY 138-40 (2010).

¹⁵⁷ Lois Beckett, *The Gun Numbers: Just 3% of American Adults Own a Collective 133m Firearms*, THE GUARDIAN (Nov. 15, 2017), available at <https://www.theguardian.com/us-news/2017/nov/15/the-gun-numbers-just-3-of-american-adults-own-a-collective-133m-47>

79. Contrast that with the colonial era. Historian Kevin Sweeney's painstaking work in probate records from British North America has revealed that only 4.4% of male probate inventories contained more than three arms, and that only 1.4% contained more than five.¹⁵⁸ Rather than aficionados or preppers, most of the tiny number of early American "super-owners" had entirely practical, utilitarian reasons to maintain private arsenals. More than two-thirds of those in Sweeney's sample who owned six or more guns were southern slaveholders.¹⁵⁹ All ten of the probate inventories containing ten guns or more belonged to South Carolinian planters who ran vast slave labor enterprises, averaging ninety-five enslaved laborers each.¹⁶⁰ Americans of the late eighteenth century would have found today's hyper-commercialized and ideologically charged culture of consuming guns deeply alien.

80. Over the past generation a concern with self-defense has become central to contemporary gun culture, a shift the firearms industry has skillfully encouraged through its advertising campaigns.¹⁶¹ But crime and self-defense, in the sense of attacks on or protection against other members of one's own society, are weak explanations for colonial gun ownership. Prior to the widespread availability of breechloading weapons and metallic cartridges in the mid-nineteenth century, firearms were awkward tools either for

firearms.

¹⁵⁸ Kevin M. Sweeney, *An Eighteenth-Century Gun Culture Shaped by Restraints*, Sept. 6, 2023, Duke Center for Firearms Law Second Thoughts Blog, <https://firearmslaw.duke.edu/2023/09/an-eighteenth-century-gun-culture-shaped-by-constraints>

¹⁵⁹ See Kevin M. Sweeney's declaration at 12 in Nguyen et al., v. Bonta, 3:20-cv-02470-WQH-BGS (S.D. Cal.).

¹⁶⁰ *Id.* at 12.

¹⁶¹ The sociologist David Yamane has done important work documenting this shift in U.S. gun culture. See e.g., David Yamane, Paul Yamane, and Sebastian L. Ivory, *Targeted Advertising: Documenting the Emergence of Gun Culture 2.0 in Guns Magazine: 1955–2019*, 6 PALGRAVE COMMUNICATIONS 1 (2020).

perpetrating or resisting crimes of passion. They were notoriously inaccurate at range, liable to misfire, and had to be muzzle-loaded with gunpowder and ball before every shot, either by pouring ammunition direct into the barrel or packing in a pre-made paper cartridge loaded with powder and ball.¹⁶² That took time and focus. Moreover, such guns were seldom kept loaded and at the ready for any extended period because black powder corroded iron barrels so quickly.¹⁶³

81. Partly for these reasons, firearms usually played a relatively small role in murders between white people in North America before the era of the Civil War. Randolph Roth, the nation's foremost scholar of the history of homicide in North America, has argued that rates of gun violence rose and fell in step with political instability and shifts in faith in government, justice, and social hierarchy.¹⁶⁴ When the overall homicide rate was low, guns were used in only 10-15% of homicides. During periods of political instability before the Civil War, firearms could be used in as many as 30-40% of all homicides.¹⁶⁵ But even those unusual circumstances look different from our own times. In 2020 nearly 80% of all homicides in the United States involved a firearm.¹⁶⁶ In sum, neither consumerism nor fear of crime are adequate explanations for British North America's unusually high rates of firearm ownership.

¹⁶² Randolph Roth, *Why Guns Are and Are Not the Problem: The Relationship Between Guns and Homicide in American History*, in A RIGHT TO BEAR ARMS? THE CONTESTED ROLE OF HISTORY IN CONTEMPORARY DEBATES ON THE SECOND AMENDMENT 116–17 (Jennifer Tucker, Barton C. Hacker, & Margaret Vining eds., 2019)

¹⁶³ *Id.* at 117.

¹⁶⁴ *Id.* at 116.

¹⁶⁵ *Id.*

¹⁶⁶ For homicide and arms technology, see generally *id.* Roth's chapter draws upon his magisterial book *American Homicide*. RANDOLPH ROLF, AMERICAN HOMICIDE (2009). For 2020 homicides, see John Gramlich, *What the Data Says about Gun Deaths in the U.S.*, PEW RESEARCH CENTER (Feb. 3, 2022), available at <https://www.pewresearch.org/fact-tank/2022/02/03/what-the-data-says-about-gun-deaths-in-the-u-s/>.

82. That given, what *are* compelling explanations? Freedom from restrictive laws provides a partial answer. Gun ownership among wealthy colonists seems to have been twice as common as it was among their peers in mid-eighteenth-century England, while the poorest colonists were more than eighteen times more likely to own a gun than their counterparts in England.¹⁶⁷ Whereas England criminalized hunting and gun ownership for all but the relatively wealthy,¹⁶⁸ colonists in British North America faced no such barriers.¹⁶⁹ Even so, that fact cannot explain the great variability in gun ownership across time and space in early America. To explain that, we need to understand the importance of slavery, settler colonialism, and inter-imperial warfare.

83. In the first instance, firearms were necessary for the two systematic forms of violent predation that preoccupied generations of European colonists: dispossessing Native People of their land and enslaving people of African descent (amounting to nearly a fifth of the population in the thirteen colonies in 1775). As those ten rich South Carolinian enslavers understood very well, neither taking land from Indians nor keeping hundreds of thousands of people enslaved could have been possible without a weapons gap. But should we call this self-defense? It is true that colonists terrorizing and exploiting enslaved people and settlers encroaching on Native land (often in violation of British law) had reason to fear their victims, and, therefore, reason to be armed. But those colonists needed guns not so much for self-defense as for collective-*offense*: so that they and their neighbors could safely take what they wanted from Black and Indigenous people.

¹⁶⁷ Sweeney, *supra* note 149, at 60.

¹⁶⁸ LOIS G. SCHWOERER, GUN CULTURE IN EARLY MODERN ENGLAND 46–73, 156–70 (2016).

¹⁶⁹ Sweeney, *supra* note 149, at 59–60.

84. Many colonists also needed to be well-armed on account of imperial rivals on the continent. Warfare between western Europe's great powers provoked warfare in Americas repeatedly during the colonial era. Given the vastness of imperial claims, the vulnerability of scattered frontier settlements, and the relatively small size of imperial armies, colonists inevitably found themselves recruited into formal or informal military service in ways that very few Americans today can relate to.¹⁷⁰ Conflict between Spain, France, and Britain also magnified the risks of slavery and settler colonialism, as European powers sought advantage by arming and otherwise empowering their enemies' enemies.¹⁷¹ That happened during King Williams' War (1689-1697), Queen Anne's War (1702-1713), King George's War (1744-1748), and, especially, during the Seven Years' War (1754-1763). More than 100,000 men from the British colonies served alongside British regular forces in North America in these conflicts, which required periodic weapons shipments from the metropole.¹⁷²

85. Other colonists in the Americas obviously consumed guns, too. They consumed guns for hunting and dealing with pests, for the predations of slavery and settler colonialism, and for coping with inter-imperial war. But it seems nowhere else in the hemisphere did these imperatives reinforce each other as strongly or as often as in eastern North America.¹⁷³ Partly

¹⁷⁰ As of 2018, 7% of the adult population in the United States were veterans. See Jonathan Vespa, *Those Who Served: America's Veterans from World War II to the War on Terror*, REPORT OF THE U.S. CENSUS BUREAU (June 2, 2020), available at <https://www.census.gov/library/publications/2020/demo/acs-43.html>.

¹⁷¹ For a case-study of this phenomenon, see ALAN TAYLOR, *THE INTERNAL ENEMY: SLAVERY AND WAR IN VIRGINIA, 1772-1832* (2013).

¹⁷² See GEORGE D. MOLLER, *AMERICAN MILITARY SHOULDER ARMS, VOLUME I: COLONIAL AND REVOLUTIONARY WAR ARMS 9-12*, (2011) (appendix I provides the tally of 107,000 colonists serving in these years).

¹⁷³ French Canada, where settlers likewise engaged in warfare with Native People, contented with imperial rivals, and (to a lesser extent) practiced slavery, seems to be the exception that proves the rule. Census records indicate arms ownership by about two-thirds of the male population of New France in the eighteenth century. See Jay Cassel, *The Militia*

for that reason, nowhere else was the state so energetic in its attempts to arm such a large percentage of its colonial population. Today, we associate state regulation of firearms with various kinds of limitations on private ownership. With an appreciation of the difference between their times and our own, we can understand why colonial-era regulations were more likely to encourage and even mandate private gun ownership rather than to restrict it.

B.2 State Regulation Was Potent Enough to Shape the Geography of Gun Ownership in Early America

86. The most consequential firearm regulations in early America concerned militias, the formal, compulsory, selective, state-sanctioned organizations through which colonists undertook most martial activities.¹⁷⁴ Colonial authorities passed hundreds of militia laws before the Revolution, laws mandating how these armed bodies were to be constituted, mobilized, equipped, led, and disciplined.¹⁷⁵ Research in probate records makes it clear that government exerted a powerful influence on the geography of gun ownership in the British colonies, and that it did so primarily through the mechanism of militia laws. Gun ownership was highest in those colonies where governments energetically encouraged and supported militia service. These were places where slavery, settler colonialism, and/or nearby imperial rivals provoked security concerns. In such places, colonial authorities mandated gun ownership and, in times of heightened anxiety, took steps to equip militiamen who lacked

Legend: Canadians at war, 1665-1760, IN CANADIAN MILITARY HISTORY SINCE THE SEVENTEENTH CENTURY 61 (YVES TREMBLY, ED., 2001).

¹⁷⁴ Kevin M. Sweeney, *Firearms, Militias, and the Second Amendment, in THE SECOND AMENDMENT ON TRIAL: CRITICAL ESSAYS ON DISTRICT OF COLUMBIA V. HELLER 311* (Saul Cornell & Nathan Kozuskanich eds., 2013).

¹⁷⁵ Several hundred of these laws were anthologized by the Selective Service System in the mid-twentieth century. See *MILITARY OBLIGATION: THE AMERICAN TRADITION; A COMPILATION OF THE ENACTMENTS OF COMPULSION FROM THE EARLIEST SETTLEMENTS OF THE ORIGINAL THIRTEEN COLONIES IN 1607 THROUGH THE ARTICLES OF CONFEDERATION 1789* (ARTHUR VOLLMER ED., 1947).

their own arms.¹⁷⁶

87. In mid-seventeenth-century New England, for example, with its violently expanding settler frontier and robust militia tradition, nearly 70% of male probate inventories included a firearm.¹⁷⁷ Ownership was nearly as high in the Chesapeake. In late-seventeenth-century Virginia, where anxious authorities restricted militia service to property owners but took an active role in arming them, firearms likewise appear in 70% of male probate inventories.¹⁷⁸ Vulnerable South Carolina, which not only had an enslaved majority but shared frontiers with the mighty Creek and Cherokee nations to the West and (prior to the establishment of Georgia) with rival Spanish Florida to the South, was even better armed by the mid-eighteenth century.¹⁷⁹ There, colonial and imperial officials cooperated to ensure white colonists possessed firearms, and even armed enslaved men for militia service in wartime.¹⁸⁰

88. In contrast, mid-Atlantic colonies with weak or nonexistent militia traditions usually had far lower rates of gun ownership. Dutch and English New Yorkers, accustomed to relying on professional military and Native allies, owned fewer firearms than their counterparts north or south. There, firearms appear in just over half of late seventeenth-

¹⁷⁶ The association between militia organization and changes in firearm possession over time and place is a dominant theme in Sweeney's work. See Sweeney, *supra* note 149; Sweeney, *supra* note 174.

¹⁷⁷ See table 3.6 in Sweeney, *supra* note 149 at 61.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ For South Carolina's arming, see DE WITT BAILEY, *SMALL ARMS OF THE BRITISH FORCES IN AMERICA: 1664-1815* 110–12 (2009). For arming South Carolina's enslaved, see John W. Shy, *A New Look at Colonial Militia*, 20 WM. & MARY Q. 181 (1963); PETER MICHAEL VOELZ, *SLAVE AND SOLDIER: THE MILITARY IMPACT OF BLACKS IN THE COLONIAL AMERICAS* 358 (1993); Maria Alessandra Bollettino, *Slavery, War, and Britain's Atlantic Empire: Black Soldiers, Sailors, and Rebels in the Seven Years' War* 41–50 (2009) (unpublished Ph.D. Dissertation, University of Texas, Austin).

century inventories, and in barely more than a third by the mid-eighteenth century.¹⁸¹ In Pennsylvania, New Jersey, and Delaware, with few enslaved laborers, no nearby imperial rivals, and, until the mid-eighteenth century, relatively peaceful relations with Indigenous neighbors, pacifist Quaker proprietors repressed militias during most of the colonial era. As a result, here again only around a third of Pennsylvania's probate inventories contained firearms before independence.¹⁸²

89. In other words, the uneven geography of gun ownership in British North America can help us understand *why* colonists had guns, in addition to *who* had them and *where*. Colonial British North America had a robust gun culture, but it was very different from the one that prevails today. The shifting and uneven geography of ownership reveals a utilitarian and collective gun culture powerfully and actively shaped by the state. Encouraged and assisted by the metropole and by colonial governments, British North Americans armed themselves for the purpose of responding to collective opportunities and collective threats.

90. When the imperatives and dangers associated with those opportunities and threats relaxed, gun ownership seems to have declined. Massachusetts militiamen were well-armed in the decades before Metacomet's (King Philip's) War (1675-78) devastated southern New England's Indigenous polities. By the 1740s, however, the colony's militias struggled to arm themselves for the crisis of King George's War.¹⁸³ Relying on Indigenous allies and armed enslaved men from South Carolina, North Carolina defeated the formidable Tuscarora between 1711 and 1715, relieving the colony of the most proximate threat to its settler

¹⁸¹ See table 3.6 in Sweeney, *supra* note 149, at 61.

¹⁸² Sweeney, *supra* note 174, at 321-23.

¹⁸³ *Id.* at 328-29.

colonial program. Militia service declined in North Carolina over the following decades, to the point that by the mid-eighteenth century it was described as “not near half-armed and those [arms] they have very bad.”¹⁸⁴

91. The state played an enormous role in these shifting patterns of gun ownership, not only through militia regimes specific to individual colonies but through the primary fount of firepower, the imperial metropole. To a greater degree than in previous inter-imperial conflicts, the Seven Years’ War came to turn on events in North America. British war planners needed to recruit tens of thousands of colonists but found that most of them were either unwilling or unable to muster into service with an appropriate firearm. Consequently, Britain shipped more than 66,000 guns to the colonies between 1756-1763.¹⁸⁵ That sudden infusion of firepower might have represented a fifty percent increase in the number of guns available in British North America. While thousands of these arms remained in colonial storehouses or crown arsenals after 1763, the majority apparently stayed with the colonists who mustered out of service.¹⁸⁶

92. In summary, gun culture in the late colonial era was profoundly different from American gun culture in the twenty-first century. This historic gun culture was utilitarian, rather than consumerist; state-led, rather than state-phobic; and collective, rather than

¹⁸⁴ *Id.* at 334–35.

¹⁸⁵ De Witt Bailey, the main expert on the topic, found that the British Ordnance Department sent colonial authorities in British North America 10,000 muskets in 1756 and another 12,000 in 1758. During the war, merchants operating under government license shipped another 7610 firearms to colonial governments, and 36,592 “for the planters” – that is, for private buyers. Presumably most of these buyers were likewise motivated by the war. Bailey’s figures exclude weapons shipped for the Indian trade. See Bailey, *supra* note 180, at 119–24, 236–38.

¹⁸⁶ *Id.*

individualist. The history of firearms regulation in early America needs to be understood in light of those differences.

B.3 Early America's Historical Tradition of Firearms Regulation Emerged Out of a Concern for Public Safety – As Authorities at the Time Defined It.

93. We have an incomplete understanding of the history of firearm regulation in the United States. Electronically searchable compendia of historic laws have only captured part of our legal tradition. They are particularly lacking when it comes to local ordinances, where (as today) much regulation and enforcement originated.¹⁸⁷ Still, even the incomplete record reveals a rich regulatory tradition in pursuit of public safety – safety as authorities at the time defined it.

94. Lawmakers in British North America and in the early United States passed hundreds of laws that directly or indirectly regulated firearms prior to 1791. Sometimes these concerns look familiar to our own times. For instance, states passed laws regulating the carrying¹⁸⁸ or brandishing¹⁸⁹ of particular weapons; forbidding discharge in sensitive times¹⁹⁰

¹⁸⁷ Joseph Blocher & Eric Ruben, *Originalism-by-Analogy and Second Amendment Adjudication*, 133 YALE L.J. 158 (2023).

¹⁸⁸ See, e.g., An Act Forbidding and Punishing Affrays, ch. 49, 1786 Va. Acts 35 (1786), available at <https://firearmslaw.duke.edu/laws/1786-va-laws-33-ch-21-an-act-forbidding-and-punishing-affrays/> (last visited June 1, 2023).

¹⁸⁹ See, e.g., An Act to Prevent Routs, Riots, and Tumultuous assemblies, and the Evil Consequences Thereof, 1786 Mass. Sess. Laws (1786), available at <https://firearmslaw.duke.edu/laws/1786-mass-sess-laws-an-act-to-prevent-routs-riots-and-tumultuous-assemblies-and-the-evil-consequences-thereof/> (last visited June 1, 2023).

¹⁹⁰ See, e.g., An Act to Prevent Firing of Guns and Other Firearms within this State, on Certain Days Therein Mentioned, ch. 81, 1784–1785 N.Y. Laws 152 (1785), available at <https://firearmslaw.duke.edu/laws/1784-1785-n-y-laws-152-an-act-to-prevent-firing-of-guns-and-other-firearms-within-this-state-on-certain-days-therein-mentioned-ch-81/> (last visited June 1, 2023).

and places;¹⁹¹ and sentence enhancements for crimes committed with arms.¹⁹² Regulations of all these types were enacted in the decade before the ratification of the Second Amendment, and they reflect public safety concerns familiar to twenty-first century Americans.

95. But, as explained above, the technological limitations of muzzle-loading flintlock firearms meant that regulating gun violence between subjects (or, after independence, citizens) was not remotely as significant a policy concern in the late-eighteenth century as it is today. Instead, most of the era's firearms-relevant legislation addressed public safety concerns that are thankfully alien to our own times. The hundreds of militia laws on the books directly or indirectly follow from the imperatives of slavery, settler colonialism, and inter-imperial competition. White authorities also passed numerous laws aimed at controlling the access that Indigenous and enslaved people had to arms and ammunition.¹⁹³

96. Courts have painful decisions to make about these discriminatory laws.¹⁹⁴ They are manifestly bigoted and hateful, and there is something not just objectionable but degrading about giving them any form of deference today. One option, then, is to simply

¹⁹¹ See the 1788 Ohio Law 42, "An Act for Suppressing and Prohibiting Every Species of Gaming for Money or Other Property, and for Making Void All Contracts and Payments Made in Furtherance Thereof, ch. 13, § 4, 1788–1801 Ohio Laws 42 (1788), available at <https://firearmslaw.duke.edu/laws/1788-1801-ohio-laws-42-an-act-for-suppressing-and-prohibiting-every-species-of-gaming-for-money-or-other-property-and-for-making-void-all-contracts-and-payments-made-in-furtherance-thereof-ch-13/> (last visited June 1, 2023).

¹⁹² See, e.g., the 1788 Ohio Laws 20, A Law Respecting Crimes and Punishments..., ch. 6, 1788_1801 Ohio Laws 20 (1788), available at <https://firearmslaw.duke.edu/laws/1788-1801-ohio-laws-20-a-law-respecting-crimes-and-punishments-ch-6/> (last visited June 1, 2023).

¹⁹³ The Repository of Historic Gun Laws at the Duke Center for Firearms Law has an incomplete sampling of such "race and slavery based laws": *Search Results: Race and Slavery Based*, DUKE CTR. FOR FIREARMS LAWS, https://firearmslaw.duke.edu/repository/search-results/?_sft_subjects=race-and-slavery-based (last visited June 1, 2023).

¹⁹⁴ The dilemma is sensitively described, with examples of differing solutions, in Jacob D. Charles, *On Sordid Sources in Second Amendment Litigation*, 76 STAN. L. REV. ONLINE (Aug. 2023).

exclude them from consideration of our nation's tradition of firearms regulation.¹⁹⁵ As a historian of early America, though, that strikes me as folly. Racism and white supremacy are too marbled through our history, too fundamental to explaining it, for courts to indulge the notion that we can ignore law touched by bigotry and hope to have anything coherent left afterward. Historic legislation did not target Black and Native people because gun regulation was racist. Legislation targeted Black and Native people because early American society was racist. We can be clear-eyed about the reprehensible aspects of our past generally, and the discriminatory intent of many historic firearm regulations specifically, without ignoring them. *Bruen's* demand that authorities defending firearms laws identify historic analogues would make it even more impoverishing to cordon off swaths of an already incomplete legal record - hence the longstanding enthusiasm of gun-rights activists for this approach.¹⁹⁶

97. Instead, we should scrutinize the whole of the known legal record for insights into how the founding generation would have understood the scope of their regulatory authority. Judge Amy Coney Barrett, before her appointment to the Supreme Court, employed just this sort of analysis when considering historic race-based gun laws during a 2019 gun-case before the 7th Circuit. While acknowledging that such laws would of course be unconstitutional today, Barrett abstracted from them the more general and historically

¹⁹⁵ *Id.*

¹⁹⁶ Gun-rights advocates have long argued that the racist character of much early American gun law disqualifies it from relevance in contemporary legal battles. See e.g., Clayton E. Cramer, *The Racist Roots of Gun Control*, 4 KAN. J.L. & PUB. POL'Y 17 (1995); David Kopel & Joseph Greenlee, *The Racist Origin of Gun Control Laws*, THE HILL (Aug. 22, 2017), <https://thehill.com/blogs/pundits-blog/civil-rights/347324-the-racist-origin-of-gun-control-laws/>. For an illuminating consideration of the history of race-specific gun law and how it has been instrumentalized by gun-rights activists, see Patrick J. Charles, *Racist History and the Second Amendment: A Critical Commentary*, 43 CARDOZO L. REV. 1343 (2022).

undeniable principle that “founding-era legislatures categorically disarmed groups whom they judged to be a threat to public safety.”¹⁹⁷

98. Crucially, founding-era legislatures clearly believed that this authority extended to disarming white people, too. English precedents for the disarming of Catholics, insurgents, “disaffected persons,” and others judged “dangerous to the peace of the kingdom” shaped practice in the colonies.¹⁹⁸ Seventeenth-century Massachusetts disarmed religious dissidents, for example. Maryland, Virginia, and Pennsylvania all passed laws to disarm Catholics during the Seven Years’ War.¹⁹⁹

99. The scope of the state’s perceived authority to disarm came into sharp focus in the early years of the American Revolution. Patriot committees began disarming white political opponents as early as the fall of 1775. Events in the colony of New York illustrate the pattern. Patriots in Brookhaven, New York, resolved in September 1775 to disarm anyone who dared “deny the authority of the Continental or of this Congress, or the Committee of Safety, or the Committees of the respective Counties, Cities, Towns, Manors, Precincts, or Districts in this Colony.”²⁰⁰ At this point in the rebellion many residents of New York were

¹⁹⁷ See Judge Coney-Barrett’s dissent in *Kanter v. Barr*, 919 F.3d 437, 458 (7th Cir. 2019). For thoughtful analysis of this point, see Joseph Blocher & Catie Carberry, *Historical Gun Laws Targeting ‘Dangerous’ Groups and Outsiders*, in NEW HISTORIES OF GUN RIGHTS AND REGULATION: ESSAYS ON THE PLACE OF GUNS IN AMERICAN LAW AND SOCIETY 131-48 (Joseph Blocher, Jacob D. Charles, & Darrell A. H. Miller eds., 2023); Charles, *supra* note 194, at 5. On June 2, 2023, an all-Republican appointed panel for the Eighth Circuit adopted this approach to reject a Second Amendment challenge to the felon-in-possession law. *See United States v. Edell Jackson*, No. 22-2870 (8th Cir. 2023).

¹⁹⁸ Joseph G. S. Greenlee, *The Historical Justification for Prohibiting Dangerous Persons from Possessing Arms* 20, WYOMING L. REV., 257-61 (2020).

¹⁹⁹ *Id.* at 263-64.

²⁰⁰ Thomas Verenna, *Disarming the Disaffected*, JOURNAL OF THE AMERICAN REVOLUTION (Aug. 26, 2014), <https://allthingsliberty.com/2014/08/disarming-the-disaffected/>.

either loyalists or vainly hoping to remain neutral in the spiraling conflict with Britain, so such disarmament orders theoretically applied to a vast population. In January 1776, the Continental Congress ordered several hundred-armed militiamen into Queen's County in New York to disarm loyalists.²⁰¹ George Washington ordered General Charles Lee to disarm everyone in Long Island "whose conduct, and declarations have render'd them justly suspected of Designs unfriendly to the Views of Congress."²⁰² General Philip Schuyler disarmed "malignants" in the Hudson Valley, mostly Scotch Highlanders loyal to the king. In March of 1776, Congress concluded that nearly the entire population of Staten Island consisted of "avowed Foes" and ordered a general disarmament there.²⁰³

100. Disarmament was not confined to New York. Frustrated at the results of more targeted efforts, the Continental Congress called for a general ban of gun ownership among loyalists on March 14, 1776. It recommended to all the individual colonies that they immediately "cause all persons to be disarmed within their respective colonies, who are notoriously disaffected to the cause of America, or who have not associated, and shall refuse to associate, to defend, by arms, these United Colonies."²⁰⁴ In addition to New York, Patriot

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ See Congressional Resolutions of Tuesday, Jan. 2, 1776, in UNITED STATES CONTINENTAL CONGRESS, JOURNALS OF THE CONTINENTAL CONGRESS, 1774-1789, EDITED FROM THE ORIGINAL RECORDS IN THE LIBRARY OF CONGRESS, VOL. 4 205 (Worthington Chauncey Ford ed., 1904).

leaders ordered loyalists disarmed in Connecticut²⁰⁵, North Carolina²⁰⁶, Delaware²⁰⁷, Georgia,²⁰⁸ New Hampshire²⁰⁹, New Jersey²¹⁰, South Carolina²¹¹, Pennsylvania²¹², Massachusetts²¹³, Maryland²¹⁴, and Virginia.²¹⁵

101. There were two primary motivations for the Founding Fathers and likeminded Americans to orchestrate a nationwide disarmament campaign against white political opponents. First, loyalists could of course use their weapons to resist the insurgency and fight for the king. Second, patriot forces were perilously under-armed and needed whatever guns they could find. This is the reason that George Washington argued for a broad confiscation

²⁰⁵ *An Act for restraining and punishing Persons who are inimical to the Liberties of this and the rest of the United Colonies*, Connecticut Assembly, Dec. 14, 1775, in AMERICAN ARCHIVES: CONSISTING OF A COLLECTION OF AUTHENTICK RECORDS, STATE PAPERS, DEBATES, AND LETTERS AND OTHER NOTICES OF PUBLICK AFFAIRS, FOURTH SERIES, VOL. 4 270–72 (M. St. Claire Clarke & Peter Force eds., 1837) [hereinafter AMERICAN ARCHIVES].

²⁰⁶ *Extract of a Letter from the Provincial Council of North Carolina, March 5, 1776*, in AMERICAN ARCHIVES, VOL. 5, *supra* note 205, at 59, 67.

²⁰⁷ “General Orders for the Delaware State,” in DELAWARE ARCHIVES: REVOLUTIONARY WAR IN THREE VOLUMES, VOL 3, at 1049 (1919). See also resolutions for Thursday, July 3, 1777, in UNITED STATES CONTINENTAL CONGRESS, *supra* note 204, VOL. 8, 529-30.

²⁰⁸ “Special meeting of the Council of Safety,” Jan 18, 1776, in ALLEN DANIEL CANDLER, ED., THE REVOLUTIONARY RECORDS OF THE STATE OF GEORGIA 101 (1908).

²⁰⁹ OTIS GRANT HAMMOND, THE TORIES OF NEW HAMPSHIRE IN THE WAR OF THE REVOLUTION 19 (1917).

²¹⁰ *July 1, All persons who refuse to bear arms to be disarmed*, in AMERICAN ARCHIVES, VOL 6, *supra* note 205, at 1634.

²¹¹ *South Carolina Congress, March 13, 1776*, in AMERICAN ARCHIVES, VOL 5, *supra* note 205, at 592. South Carolina went further, ordering that if anyone previously disarmed shall arm himself again, that person would be incarcerated.

²¹² *See Resolves of the Pennsylvania Assembly for April 6, 1776*, in AMERICAN ARCHIVES, VOL 5, *supra* note 205, at 714.

²¹³ *See Notes from the Massachusetts Council, May 1, 1776*, in AMERICAN ARCHIVES, VOL 5, *supra* note 205, at 1301.

²¹⁴ *See Notes from the Baltimore County Committee, March 8, 1776*, in AMERICAN ARCHIVES, VOL 5, *supra* note 205, at 1509.

²¹⁵ *Extracts from the Votes of the Assembly [VA], April 6, 1776*, in AMERICAN ARCHIVES, VOL 6, *supra* note 205, at 881.

program in at least one Pennsylvania county, targeting not only those actively fighting for the crown, but also those who “claimed the Right of remaining Neuter.” Washington insisted that “we ought not to hesitate a Moment in taking their arms, which will be so much wanted in furnishing the new Levies.”²¹⁶ There is a striking flexibility in these revolutionary-era disarmaments, in other words. They were undertaken preemptively, targeted not so much at people who had taken up arms against the newly cohering political authority but rather at people who might decide to do so in the future. And they could be undertaken both to preemptively disempower political opponents and out of a very practical imperative to arm insurgent forces.

102. Indeed, patriot forces were so desperate for guns early in the war that they sometimes took them from whites regardless of their political affiliation. In early 1776, Georgia dispatched men to search the homes of all “overseers and negroes” throughout the colony, and even those across the river in southern South Carolina, to seize all guns and ammunition they found, leaving behind only “one gun and thirteen cartridges for each overseer.”²¹⁷

103. From New Hampshire in the north to Georgia in the south, then, guns were taken away from white Americans in the name of public safety—public safety as the founding generation defined it. The emergency of the Revolution obviously made it easier for lawmakers to justify taking guns from white people, but the conviction that the state had regulatory authority to do so not only predated the Revolution; it endured after it. Consider the

²¹⁶ George Washington to the Pennsylvania Council of Safety (Dec. 15, 1776), at <https://founders.archives.gov/documents/Washington/03-07-02-0276>

²¹⁷ Candler, *supra* note 208, at 92.

1786 a tax uprising that erupted in western Massachusetts. “Shay’s Rebellion,” as it came to be known, helped convince nationalists to convene the Constitutional Convention in 1787. That same year the uprising also moved the Massachusetts Assembly to pass a law disarming not only persons who take up arms against the state, but also those “who have given or may hereafter give them counsel, aid, comfort or support, voluntarily, with intent to encourage the opposition to the government.”²¹⁸

104. In sum, early America had a diverse, extensive, and sometimes deeply intrusive tradition of regulating firearms in the name of public safety. This tradition was often but certainly not always directed at racial minorities. Why, then, as Greenlee puts it, was arms-making “widely celebrated and virtually never regulated?”²¹⁹

B.4 Amateur Arms-Making Was Irrelevant to Colonial Firearms Regulation & to the Second Amendment

105. Like Greenlee, Plaintiffs attribute the absence of regulation to an ideological commitment to protect the right of amateurs to make firearms. Indeed, Plaintiffs even insist that the Second Amendment was ratified in order to protect the right of amateurs to make firearms. As they put it in their complaint, “the ratifiers of the Bill of Rights remembered that the young country depended on the manufacture of firearms by those outside of the firearms industry for survival and intended to protect such activity through the Second Amendment.”²²⁰

²¹⁸ See Massachusetts Act of Feb. 16, 1787, ch. VI, 1787 MASS ACTS 555 (1787), available at <https://firearmslaw.duke.edu/laws/act-of-feb-16-1787-ch-vi-1787-mass-acts-555/> (last visited June 1, 2023).

²¹⁹ Greenlee, *supra* note 17, at 79.

²²⁰ *Supra*, note 2, at 50. For similar, and similarly unconvincing claims, see Greenlee, *supra* note 17, at 61-62.

106. Neither claim – about the absence of regulation or the Second Amendment – is correct. Early American lawmakers had no reason to regulate amateur firearms-making because amateurs didn’t make firearms. It is true that lawmakers celebrated rather than restricted professional gun-making. Given the prevalence of war and rarity of gun crime, it would have been shocking if they had done anything to restrict the profession. Their focus was necessarily on encouraging rather than discouraging the arms industry.

107. As for the Second Amendment: Plaintiffs argue that “the answers to the questions of law in this case require a textual and historical inquiry into the original meaning of the Second Amendment.”²²¹ But the theory they advance about the amendment’s original meaning is at odds with the historical record and with all serious scholarship on the Constitution and founding era. The drafters and ratifiers of the Constitution knew firsthand that their young country had *never* “depended on the manufacture of firearms by those outside of the firearms industry for survival.” All of them understood that domestic firearms production had been a great disappointment during the Revolution, and that what little success there had been came through governments organizing the work of professionals – artisans with long experience in the firearms industry supported by apprentices who entered the profession during the war. It is unsurprising, therefore, that words like “make,” “assemble,” “construct,” or “manufacture” appear nowhere in the Second Amendment or its preliminary drafts. To my knowledge, there is no reference anywhere in the records of the debates over ratification to anxiety that the state might forbid “those outside the firearms industry” from making firearms.

²²¹ *Supra*, note 2, at 132.

108. That said, Plaintiffs are correct that the founding generation drew upon its knowledge about firearms in the colonial and founding eras when drafting, debating, and ratifying the Second Amendment. As explained above, the gun culture they knew was one that for generations had evolved around collective threats and opportunities, most of them connected to slavery, settler colonialism, and inter-imperial war. Above all, it was a gun culture that had been molded by the state. Throughout the colonial and founding eras, government exerted an enormous influence on who did and did not have guns, and on shifting patterns of firearms ownership over time and space. When acute collective threats and opportunities arose, whether huge (the Seven Years' War) or modest (Lord Dunmore's War), much of the public relied on the state for arms and ammunition.

109. Most immediately, the founding generation thought about firearms in relation to their formative experience of the American Revolution. Victory in the Revolution had been armed not by amateur gun-makers, but by the state. It had been armed, in the first instance, by local insurgent committees purchasing whatever they could and confiscating the arms of political opponents. It had been armed by colonial assemblies who partnered with prominent merchants to scour Caribbean markets for muskets and gunpowder. It had been armed by the Continental Congress, which oversaw a sophisticated and sprawling international program to import guns and ammunition. Most importantly, victory in the Revolution had been armed by the generous patronage of foreign governments.²²²

110. The state's role in arming the Revolution was vitally important in debates over the Second Amendment. After prolonged controversy and argument, Article I, Section 8 of the

²²² See DeLay, *supra* note 119.

Constitution had just secured to the new federal government sweeping powers over state militias. Congress was empowered to “provide for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repel Invasions; To provide for organizing, arming, and disciplining, the Militia, and for governing such Part of them as may be employed in the Service of the United States.”²²³ All political observers at the time understood state power to be a precondition to arming effective collective action. Everything about the colonial and revolutionary experience confirmed that. Indeed, the state was so essential to equipping effective collective action that it could effectively disarm just by failing to arm.

111. That given, it is little wonder that many feared the Federal government would abuse its new authority over state militias by doing just that: by failing to arm. The Virginian George Mason, delegate to the Constitutional Convention whose reservations prevented him from signing the finished document, gave voice to these anxieties. At his state’s ratifying convention, Mason objected that the new Constitution gave national authorities “almost unlimited Authority over the militia of the several states; whereby, under Colour of regulating, they may disarm, or render useless the Militia, the more easily to govern by a standing Army...”²²⁴ Mason’s suggested remedy was “an express declaration, that the state governments might arm and discipline” their militias.²²⁵ Virginia’s Federalists tried to assuage these fears. John Marshall, future U.S. Chief Justice, argued that “if Congress neglect our militia, we can arm them ourselves.” Tellingly, though, Marshall assumed that it would be the state’s

²²³ U.S. CONS. Art. I, § 8.

²²⁴ Letter from George Mason to Thomas Jefferson (May 26, 1788), *available at* <https://founders.archives.gov/?q=%20Author%3A%22Mason%2C%20George%22%20Recipient%3A%22Jefferson%2C%20Thomas%22&s=1111311111&r=6>.

²²⁵ Sweeney, *supra* note 174, at 360.

importers, rather than its professional gunsmiths (let alone its unskilled amateurs) that would step into the breech in case of federal neglect. He asked his fellow delegates, “cannot Virginia import arms?”²²⁶

112. Despite such arguments, anti-federalists continued to warn against the dangers of federal power over arming state militias. The Second Amendment was crafted to address these and other concerns about reconciling republican liberty with the need for effective military power.²²⁷ The language of Madison’s initial draft is even clearer on this point than the ratified edit: “the right of the people to keep and bear arms shall not be infringed; a well armed and well regulated militia being the best security of a free country: but no person religiously scrupulous of bearing arms, shall be compelled to render military service in person.”²²⁸ Contrary to Plaintiffs’ claims, in sum, anxieties over self-made arms had nothing to do with the drafting or ratification of the Second Amendment.

B.5 The Evolving Tradition of Firearms Regulation in the United States

113. The newly-independent United States inherited a colonial-era tradition of arms regulation rooted in concern for public safety. Over the following generations, authorities at various levels of government built on that regulatory tradition. Public safety continued to be the core imperative, even as several major changes provoked more and more varied kinds of regulation. These changes include dramatic population increases and rapid urbanization; the

²²⁶ THE DOCUMENTARY HISTORY OF THE RATIFICATION OF THE CONSTITUTION DIGITAL EDITION 1309 (John P. Kaminski et al., 2009), quoted in Graham Ambrose, Gunmaking at the Founding (March 2024 draft), 77 Stan. L. Rev. (Forthcoming 2025), at 11.

²²⁷ Brief of Jack N. Rakove, Saul Cornell, David T. Konig, Lois G. Schwoerer et al. as Amici Curiae, District of Columbia v. Heller, 554 U.S. 570 (2008).

²²⁸ Quoted in Sweeney, *supra* note 174 at 361. For the larger debate over arming the militia, see *id.* at 359–61.

industrial revolution and the mass-production of weapons in the United States; and unprecedented advances in firearms technology that made guns increasingly dangerous. To use the language of Bruen's framework, waves of "dramatic technological changes" in how firearms were made and how they operated repeatedly provoked "unprecedented societal concerns" in a perpetually growing and urbanizing United States. From the early nineteenth century through the early twenty-first, authorities at the local, territorial, state, and national levels have responded to these concerns by regulating firearms and other dangerous weapons. A brief survey of this history will help explain why ghost gun restrictions are consistent with America's evolving tradition of firearms regulation in the name of public safety.

114. The advent of percussion cap ignition in the early nineteenth century opened the way for the production of reliable repeating pistols. Relieved of cumbersome hammer-vices, flints, and priming pans filled with loose powder, arms designers saw a path to using older ideas of multiple, rotating barrels or rotating breeches to make practical weapons for the first time.²²⁹ In decades prior, such designs would have still faced severe manufacturing obstacles to large-scale production because it was so difficult to make precision component parts by hand. But by the 1820s, the federal armory at Springfield and some of the nation's biggest government arms contractors had become world-leaders in the use of automatic milling machines to produce parts so uniform as to be interchangeable. This "American system of manufacture" as the rest of the world would soon call it, combined with other advances in metallurgy and machine tooling made it possible both to build complex arms from

²²⁹ HERBERT G. HOUZE, SAMUEL COLT: ARMS, ART, AND INVENTION 24 (2006)

nearly identical component parts, and to manufacture them at greater speed and less cost than ever before. By the 1820s, American manufacturers were beginning to mass-produce single-shot, percussion-cap pistols. By the 1830s, handheld “revolvers” (with a rotating, multi-chambered breech) and “pepperboxes” (with multiple barrels rotating around an axis) started entering the market.²³⁰

115. These increasingly common weapons generated unprecedented societal concerns, and these societal concerns generated legislation. Responding to rising threats to public safety from the increase in gun violence and the proliferation of concealable weapons (repeating pistols as well as single-shot, percussion-cap pistols, bowie knives, and other weapons), lawmakers across the country sought to regulate conceal-carry. More than thirty such laws were enacted around the country between the ratifications of the Second and Fourteenth Amendments.²³¹

116. The U.S. Civil War resulted in a massive increase in the productive capacity of the domestic arms industry, and a large and permanent increase in the number of firearms in the United States. State and municipal lawmakers reacted to the corresponding public safety concerns by accelerating the scale and pace of regulation. Exciting new historical scholarship on nineteenth-century firearms regulation has made it increasingly clear that America’s

²³⁰ WILLIAM HARDY MCNEILL, THE PURSUIT OF POWER: TECHNOLOGY, ARMED FORCE, AND SOCIETY SINCE A.D. 1000 233-34 (1982). See also MERRITT ROE SMITH, HARPERS FERRY ARMORY AND THE NEW TECHNOLOGY: THE CHALLENGE OF CHANGE 219-51 (1977).

²³¹ Saul Cornell, *Limits on Armed Travel under Anglo-American Law: Change and Continuity over the Constitutional Longue Durée, 1688-1868*, in *A RIGHT TO BEAR ARMS? THE CONTESTED ROLE OF HISTORY IN CONTEMPORARY DEBATE ON THE SECOND AMENDMENT* 79 (Jennifer Tucker, Barton C. Hacker, & Margaret Vining eds., 2019); Robert J. Spitzer, *Gun Law History in the United States and Second Amendment Rights*, 80 LAW & CONTEMP. PROBS. 55, 59-60, 63-64 (2017). For the relevant laws, see Mark Frassetto, *Firearms and Weapons Legislation up to the Early 20th Century* (Jan. 15, 2013), at 20-24, available at <https://ssrn.com/abstract=2200991> (last accessed July 21, 2023).

robust tradition of regulating arms in the name of public safety became even more pronounced after the Civil War.²³² Consider regulations on carrying weapons. The Duke Repository of Historical Gun Laws, an indispensable though incomplete compendium, contains 285 regulations on carrying weapons enacted between 1865 and 1900.²³³ By the turn of the century, the majority living in the nation's most populous urban areas – millions of Americans – were subject to one restrictive carry regime or another.²³⁴

117. Regulatory distinction between the government and the civilian population is another feature of the Nation's historical tradition of firearm regulation that came to prominence during the nineteenth century. After mid-century, local, territorial, and state authorities routinely incorporated language into firearms regulations that exempted law enforcement and/or military personnel from their provisions. In 1856, for example, New Orleans forbade dangerous weapons (concealed or otherwise) in "any theater, public hall, tavern, pic-nic ground, place for shows or exhibitions, house or other place of public entertainment or amusement." Military personnel were explicitly exempt.²³⁵ In 1857,

²³² The historian Brennan Gardner Rivas is producing some of the nation's most exciting and important new scholarship on nineteenth-century firearms regulation. See e.g., Brennan Gardner Rivas, *An Unequal Right to Bear Arms: State Weapons Laws and White Supremacy in Texas, 1836–1900*, 121 SOUTHWESTERN HIST. Q 284 (2017); Brennan Gardner Rivas, *Enforcement of Public Carry Restrictions: Texas as a Case Study Symposium: The 2nd Amendment at the Supreme Court: '700 Years of History' and the Modern Effects of Guns in Public*, 55 U.C. DAVIS L. REV. 2603 (2022); Brennan Gardner Rivas, *Perspective:/ In the Past, Americans Confronted Gun Violence by Taking Action*, WASHINGTON POST (June 3, 2022), available at <https://www.washingtonpost.com/outlook/2022/06/03/past-americans-confronted-gun-violence-by-taking-action/>.

²³³ <https://firearmslaw.duke.edu/repository-of-historical-gun-laws/advanced-search>, searching for the category "carrying weapons" between 1865-1900. Search performed Jan. 27, 2024.

²³⁴ Saul Cornell, *The Long Arc of Arms Regulation in Public: From Surety to Permitting, 1328-1928*, 55 U.C. DAVIS L. REV. 2554, 2591–96, (2022).

²³⁵ See *Jewell's Digest of the City Ordinances* (New Orleans, 1882), pp. 1-2.

Washington D.C. prohibited the carry of various dangerous weapons, including pistols and Colt revolvers, but exempted “police officers, the members of the auxiliary guard, and the military” from its provisions.²³⁶ Memphis passed a similar ordinance that same year, but required police officers to obtain permission from a commanding officer to carry any of the prohibited weapons.²³⁷

118. These distinctions became even more common after the Civil War. Between 1866 and 1892, at least nineteen states²³⁸ and two territories²³⁹ incorporated explicit exemptions for law enforcement and/or military personnel into laws regulating firearms. We know far less about the regulatory history of municipalities, but my very incomplete search

²³⁶ Washington D.C. City Ordinance, approved Nov. 4, 1857, reprinted in *The American* (Washington, D.C.), Nov. 11, 1857.

²³⁷ See Smith P. Bankhead, *Digest of Charters and Ordinances of the City of Memphis* (Memphis, Tenn., 1860), 286.

²³⁸ In addition to the Texas, Iowa, and Washington laws above, these include New York, 1866 (see *Statutes at Large of the State of New York* (Albany: 1869), pp. 810-11); Nevada, 1867 (*Statutes of the State of Nevada Passed at the Third Session of the Legislature, 1867* (Carson City: 1867), p. 66); Georgia, 1870 (*The Code of Georgia* (Atlanta: 1882), p. 1181-82; Missouri, 1875 (*Laws of Missouri* (Jefferson City: 1875), pp. 50-51; Tennessee, 1870 (*A Compilation of the Statute Laws of the State of Tennessee* (St. Louis: 1872), pp. 88-92; Texas, 1871 (“Brief of Thirty-Four Professional historians,” pp. 27a-28a); North Carolina, 1877 (*Laws and Resolutions of the State of North Carolina, Passed by the General Assembly at its Session 1876-77* (Raleigh: 1877), pp. 162-63); Kentucky, 1880 (“Brief of Thirty-Four Professional historians,” pp. 12a-13a); South Carolina, 1880 (*ibid.*, 21a); Mississippi, 1880 (*The Revised Code of the Statute Laws of the State of Mississippi* (Jackson: 1880), p. 776); Arkansas, 1881 (“Brief of Thirty-Four Professional historians,” pp. 3a-4a); Colorado, 1883 (*The General Statutes of the State of Colorado, 1883* (Denver: 1883), p. 339; Illinois, 1887 (*The Revised Statutes of the State of Illinois, 1887*), p. 441-42); Minnesota, 1889 (*General Statutes of the State of Minnesota* (St. Paul: 1888), p. 1006-07; Michigan, 1890 (*Laws of the State of Michigan Relating to Public Health* (Lansing: 1889), p. 145); and Oregon, 1892 (“Brief of Thirty-Four Professional historians,” p. 20a). The Idaho law concerned brandishing, the Georgia, Missouri, and Texas laws concerned sensitive places, and all the other laws concerned concealed carry.

²³⁹ New Mexico Territory, 1869 (*Laws of the Territory of New Mexico* (Santa Fe, 1869), p. 72-76); Arizona, 1889 (*Acts, Resolutions, and Memorials of the Fifteenth Legislative Assembly of the Territory of Arizona* (Prescott, 1889), p. 11-12. For an earlier law (not included in the count above), see Idaho Territory, 1864 (*Laws of the Territory of Idaho* (Lewiston: 1864), p. 442. Idaho’s law concerned brandishing. New Mexico and Arizona’s law regulated the carry of weapons (concealed or open).

revealed similar laws in Memphis, Tennessee²⁴⁰; Jersey City (1868)²⁴¹; Washington, D.C. (1871)²⁴²; Omaha, Nebraska (1872)²⁴³; Fayetteville, Tennessee (1876)²⁴⁴; Mexico, Missouri (1877)²⁴⁵; Provo City, Utah (1877)²⁴⁶; Kansas City, Missouri (1880)²⁴⁷; Albany, New York (1887)²⁴⁸; and Milwaukee, Wisconsin (1888).²⁴⁹ I am very confident that further research would unearth more nineteenth-century examples of firearms legislation making distinctions between civilians and the police or military.

119. Authorities in twentieth-century America maintained and extended this Nation's historic tradition of regulating firearms in the name of public safety. For example, the carriage of firearms continued to generate societal problems, and regulators responded with more than 100 carry laws between 1900-1935.²⁵⁰ But the turn of the century also witnessed a new wave of dramatic technological advances in firearms. Three innovations in particular – self-loading mechanisms, smokeless powder, and detachable magazines – made it possible for gunmakers to introduce radically new kinds of firearms. Semi-automatic pistols incorporating

²⁴⁰ See *The Public Ledger* (Memphis), Oct. 21, 1869.

²⁴¹ *Revised Ordinances of Jersey City*, Jersey City: Howard C. Griffiths, 1899, p 121.

²⁴² *Laws of the District of Columbia, 1871-1872*, Washington, D.C.: Chronicle Publishing Company, 1872, p33.

²⁴³ *The Revised Ordinances of the City of Omaha* (Omaha, 1872), pp.86-87.

²⁴⁴ Ordinance printed in the *Fayetteville Observer*, Aug. 31, 1876.

²⁴⁵ See “Ordinances of the City of Mexico,” reprinted in the *Mexico Weekly Ledger*, Jan. 25, 1877.

²⁴⁶ *The Revised Ordinances of Provo City* (Salt Lake City: 1877), pp. 106-07.

²⁴⁷ See Gardiner Lathrop and James Gibson, compilers, *An Ordinance in Revision of the Ordinances Governing the City of Kansas* (Kansas City, 1880), pp. 264-65.

²⁴⁸ See *Charter and General Ordinances of the City of Albany* (Albany, 1887), 110.

²⁴⁹ See *The General Ordinances of the City of Milwaukee* (Milwaukee, 1888), 227-28.

²⁵⁰ <https://firearmslaw.duke.edu/repository-of-historical-gun-laws/advanced-search>, searching for the category “carrying weapons” between 1900-1935. Search performed Jan. 27, 2024

all three innovations were pioneered in the 1890s. Along with automatic and semi-automatic rifles, these handguns became increasingly popular in the U.S. civilian market in the early decades of the twentieth century.²⁵¹

120. Thanks to their rapid rate of fire, and because detachable magazines enabled users to load and reload all at once, rather than round by round, the new firearms empowered individual shooters to inflict far more damage on more people than had been possible with earlier gun technologies. So, as they had with the proliferation of single-shot and multi-fire pistols in the nineteenth century, lawmakers responded to the novel threat to public safety with legislation. Between 1925 and 1933, at least twenty-eight states passed laws against fully automatic firearms.²⁵² At least seven states passed laws regulating semi-automatic firearms.²⁵³ In 1934, Congress passed the National Firearms Act, the first significant federal firearm law in the nation's history, regulating fully automatic firearms along with several other kinds of weapons. Notably, these regulations did not apply to military or law enforcement. Therefore, the American tradition of firearms regulation has distinguished between civilians and the government for nearly a century at the federal level, and nearly two centuries at the state level.²⁵⁴

121. Since the passage of the National Firearms Act, there has been a rich and complex history of municipal, state, and federal firearms regulation in the name of public safety. Landmarks include the 1986 Firearm Owners' Protection Act, which, among other

²⁵¹ Brian DeLay, *The Myth of Continuity in American Gun Culture*, 113 CALIF. L. REV. __ (forthcoming 2025), at 40-42.

²⁵² Spitzer, *supra* note 231, at 67.

²⁵³ Ibid., 68-71.

²⁵⁴ ROBERT J. SPITZER, THE POLITICS OF GUN CONTROL 139 (6th ed. 2015).

things, banned the transfer or possession of machine guns; the 1993 Brady Handgun Violence Protection Act, which mandated background checks; and the 1994 Federal Assault Weapons Ban (which Congress allowed to lapse a decade later). None of the regulations in that ninety-year history since the National Firearms Act has been more consequential than the 1968 Gun Control Act, the law that, among other things, established the serialization requirements that manufacturers and consumers of ghost guns, and the plaintiffs in this case, hope to avoid. In no sense are the entrepreneurs who sell parts and kits or their customers part of a historic tradition of “self-made arms” that should shield them from the serialization requirements that for more than half a century have been essential to solving gun crime and that have applied to all other firearms.

CONCLUSION

122. Ghost-gun kits enable consumers with no skill, experience, or special tools to quickly assemble high-quality firearms. Nothing like that has ever existed before in American life. The dramatic technological changes that have given birth to this sub-industry have provoked unprecedented societal consequences, on account of the serialization loophole. As those consequences accelerate, we are witnessing the nation’s historic tradition of firearms regulation iterate in real time. When Greenlee drafted his article about self-made arms, six states regulated ghost guns.²⁵⁵ Today, more than twice as many do so.²⁵⁶

123. These laws are consistent with our nation’s history of firearms regulation, a tradition that has always balanced individual rights with public safety, and has always evolved

²⁵⁵ Greenlee, *supra* note 17, at 80.

²⁵⁶ Everytown for Gun Safety, *supra* note 16.

in response to new problems. Authorities in the antebellum era could not rely on eighteenth-century analogues when they sought to address the dangers posed by the proliferation of concealed weapons, because concealed weapons did not present significant dangers in the eighteenth century. Instead, antebellum-era authorities created new laws consistent with America's history and tradition of regulating firearms in the name of public safety. Authorities did the same with automatic- and semi-automatic firearms in the 1920s and 1930s and with serial numbers and other requirements on manufacturers and distributors in the 1960s. A.B.286 seeks to extend this half-century long serialization requirement to a novel technology: kits and printers that allow amateurs to quickly assemble quality firearms. The law applies a requirement that has been of vital importance to law enforcement for more than five decades, and is consistent with America's centuries-long history and tradition of firearm regulation. Treating ghost guns like any other firearm should be found constitutional under *Bruen's* history and tradition framework.

Pursuant to 28 USC §1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on April 19, 2024


BRIAN DELAY

EXHIBIT 1-A

Curriculum Vitae
Brian DeLay

EXHIBIT 1-A

Brian DeLay

University of California

3229 Dwinelle Hall

Berkeley, CA 94720-2550

<https://history.berkeley.edu/brian-delay>

delay@berkeley.edu

ACADEMIC POSITIONS

- Preston Hotchkis Chair in the History of the United States, UC Berkeley: 2016-Present
- Associate Professor of History, University of California, Berkeley: Fall 2010 - Present
- Assistant Professor of History, University of California, Berkeley: Fall 2009 – Spring 2010
- Assistant Professor of History, University of Colorado, Boulder: Fall 2004 – Spring 2009
- Lecturer in History, Harvard University: Spring 2004

EDUCATION

- Ph.D., Harvard University, Cambridge, MA: March, 2004
- MA, Harvard University: June, 1998
- B.A., University of Colorado, Boulder, *summa cum laude*: December, 1994

WORK IN PROGRESS:

- “Aim at Empire: American Revolutions through the Barrel of a Gun, 1750-1825,” book project under contract with W.W. Norton. 167k words drafted as of 6/22.
- “Means of Destruction: Guns, Freedom, and Domination in the Americas before World War II,” book manuscript under contract with W.W. Norton. Research nearly complete.
- “PATH: The Project on Arms Trade History.” Since 2008, I have been working with student research assistants to quantify the global arms trade, from the Napoleonic Wars to WWI. We have been extracting detailed import and export data from manuscript sources and, especially, from annual customs reports published by the main arms-exporting states: The United Kingdom, the United States, Belgium, and France (Germany and Spain still underway). We are nearly finished locating sources and doing the laborious work of data entry. Our relational database now has nearly 112,000 entries capturing the global movement of all kinds of war material, from percussion caps to artillery, from 1815-1915. We will soon shift to data analysis and begin applying for external funding to turn the dataset into an online tool freely available to researchers around the world.

PUBLICATIONS AND RESEARCH

Refereed Publications

- “The Arms Trade & American Revolutions,” *The American Historical Review* 128:3 (Sept. 2023), 1144-1181.
- “Foreign Relations between Indigenous Polities, 1820-1900,” in Kristin Hoganson and Jay Sexton, eds., *The Cambridge History of America and the World*, Vol 2: 1812-1900 (Cambridge University Press, 2022), 387-411.
- “Indian Polities, Empire, and Nineteenth-Century American Foreign Relations” *Diplomatic History* 39:5 (December 2015), 927-42.

Refereed Publications (cont.)

- “Watson and the Shark,” chapter in Brooke Blower and Mark Philip Bradley, eds., *The Familiar Made Strange: American Icons and Artifacts after the Transnational Turn* (Ithaca: Cornell University Press, 2015).
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” in Juliana Barr and Edward Countryman, eds., *Contested Spaces of Early America*, University of Pennsylvania Press, 2014, pp. 229-256.
- Editor, *North American Borderlands*. Routledge, 2012.
- *War of a Thousand Deserts: Indian Raids and the U.S.-Mexican War*. New Haven: Yale University Press, 2008 [paperback, 2009].
- “The Wider World of the Handsome Man: Southern Plains Indians Invade Mexico, 1830-1846,” *Journal of the Early Republic* 27 (March, 2007), 83-113
- “Independent Indians and the U.S.-Mexican War,” *American Historical Review* 112 (Feb., 2007), 35-68.

Other Publications:

- “The Myth of Continuity in American Gun Culture,” 35k-word article forthcoming in the *California Law Review* 113:1 (Feb., 2025).
- “American Guns, Mexico’s Trials,” *Bulletin of the American Academy of Arts and Sciences*, Spring, 2020
- “A Misfire on the Second Amendment,” extended review of Roxanne Dunbar-Ortiz, *Loaded: A Disarming History of the Second Amendment* for *Reviews in American History* 47:3, Sept. 2019
- Co-author with James West Davidson, William E. Gienapp, Christine Leigh Heyrman, Mark H. Lytle, and Michael B. Stoff, *Experience History: Interpreting America’s Past* [Formerly *Nation of Nations: A Narrative History of the American Republic*], McGraw-Hill (9th ed., 2019). *Concise version: *US/A History* (9th ed., 2022).
- “How the U.S. Government Created and Coddled the Arms Industry,” *The Conversation*, October 2017
- “How Not to Arm a State: American Guns and the Crisis Of Governance In Mexico, Nineteenth and Twenty-First Centuries” [24th Annual W.P. Whitsett Lecture], *Southern California Quarterly* 95:1 (Spring 2013), pp. 5-23.
- “Oportunismo, ansiedad, idealismo: los impulsos Estadunidenses durante la intervención Francesa en México,” in Jean Meyer, ed., *Memorias del Simposio Internacional 5 de Mayo*, El Colegio de Puebla, 2013, pp 269-288.
- “Comanches in the Cast: Remembering Mexico’s ‘Eminently National War,’” in Charles Faulhaber, ed., *The Bancroft Library at 150: A Sesquicentennial Symposium*, Berkeley: University of California Press, 2011.
- “How Indians Shaped the Era of the U.S.-Mexican War,” abbreviated version of Independent Indians and the U.S.-Mexican War,” in Pekka Hämäläinen and Benjamin H. Johnson, eds., *Major Problems in the History of North American Borderlands*, Wadsworth, 2011.
- Response to Daniel Walker Howe, Andrés Reséndez, Ned Blackhawk, and Leonard Sadosky’s essays in H-SHEAR roundtable on *War of a Thousand Deserts*, Nov. 2010.

Other Publications (cont.)

- Top Young Historian essay, Historians News Network, October 2010.
- “Forgotten Foes,” *Berkeley Review of Latin American Studies* (Fall 2010), 14-19.
- “James Madison and the Scolds.” Review of J. C. A. Stagg, *Borderlines in the Borderlands: James Madison and the Spanish American Frontier, 1776-1821*, *Passport* 40:3 (January 2010).
- “Why Mexico Fought,” review of Timothy J. Henderson, *A Glorious Defeat: Mexico and its War with the United States*, *Diplomatic History* 33:1 (January 2010).
- “19th Century Lessons for Today’s Drug War Policies,” *The Chronicle Review*, Tuesday, July 28, 2009,
- “It’s Time We Remembered the Role of Indians in the U.S.-Mexican War,” *History News Network*, 3/9/2009
- “War of a Thousand Deserts,” on *The Page 99 Test*,
- “Navajo,” “Popé,” and “Pueblo Indians,” in Billy G. Smith, ed. *Colonization and Settlement (1585-1763)*, Volume 2 in the 10-volume *Facts on File Encyclopedia of American History* (2003)
- “Narrative Style and Indian Actors in the Seven Years’ War,” *Common-Place: The Interactive Journal of Early American History*, 1 (1), September 2000.

PRIZES, HONORS, & AWARDS

- Vandervort Prize for Outstanding Article in Military History, Society for Military History, 2024
- Visiting Scholar, University of Melbourne, October 2017
- Fulbright Distinguished Lecturer, Doshisha American Studies Seminar (Kyoto), 2014
- Bryce Wood Book Award for the outstanding book on Latin America in the social sciences and humanities published in English, Latin American Studies Association, 2010
- HNN “Top Young Historian,” November 2010
- W. Turrentine Jackson (biennial) Award for best first book on any aspect of the history of the American West, Western History Association, 2009
- Robert M. Utley Award for best book published on the military history of the frontier and western North America, Western History Association, 2009
- Southwest Book Award, sponsored by the Border Regional Library Association, 2009
- James Broussard Best 1st book prize, Society for Historians of the Early American Republic, 2008
- Norris and Carol Hundley Best Book Award, Pacific Coast Branch of the AHA, 2008
- The Sons of the Republic of Texas Summerfield G. Roberts Best Book Award, 2008
- Finalist, Francis Parkman Prize from the Society of American Historians, 2008
- Finalist for the Clements Prize for the Best Nonfiction Book on Southwestern Americana, 2008
- Honorable Mention, TSHA Kate Broocks Bates Award for Historical Research, 2008

PRIZES, HONORS, & AWARDS (cont.)

- Finalist for the PROSE Award in the U.S. History and Biography/Autobiography category, sponsored by the Association of American Publishers, 2008
- Organization of American Historians Distinguished Lecturer, 2008-2011
- Bolton-Cutter Award for best borderlands article, Western History Association, 2008
- Robert F. Heizer Prize for the best article in the field of ethnohistory, 2008
- CLAH Article Prize, Conference on Latin American History, 2008
- Stuart Bernath Article Prize, Society for Historians of American Foreign Relations, 2008
- Phi Alpha Theta/Westerners International Prize for Best Dissertation, 2005
- Harold K. Gross Prize from Harvard University for the dissertation “demonstrating the greatest promise of a distinguished career in historical research,” 2004
- University of Colorado Residence Life Academic Teaching Award, 2005
- Derek Bok Center Awards for Excellence in Teaching, Spring 1999 and Fall 1999

GRANTS AND FELLOWSHIPS

- John Simon Guggenheim Foundation Fellowship, 2019-2020
- Marta Sutton Weeks Fellow, Stanford Humanities Center, 2019-2020
- Center for Advanced Studies in Behavioral Sciences Fellowship, 2019-2020 (declined)
- American Council of Learned Societies Fellowship, 2017-2018
- Harry Frank Guggenheim Foundation Fellowship, 2013-14'
- UC Humanities Research Fellowship Grant, 2013-14'
- UC Berkeley CORE Research Bridging Grant, 2012-14'
- Charles A. Ryskamp Research Fellowship, American Council of Learned Societies, 2010-2011
- Donald T. Harrington Fellowship, UT Austin, 2009-2010 (Declined).
- University of Colorado Graduate Committee on the Arts and Humanities Research Grant, 2008.
- American Philosophical Society / British Academy Fellowship, 2008.
- Junior Faculty Development Award, University of Colorado, 2007.
- Bill and Rita Clements Research Fellowship for the Study of Southwestern Americana, Full Year, Clements Center, Southern Methodist University, Dallas, TX, 2005-2006.
- Postdoctoral Fellowship, Full Year, Huntington Library, San Marino, CA, 2005-2006 (Declined)
- Postdoctoral Fellowship, Full Year, Newberry Library, Chicago, IL, 2005-2006 (Declined)
- Packard Foundation Dissertation Finishing Grant, 2002-2003
- American Philosophical Society, Philips Fund Grant for Native American Research, 2001
- David Rockefeller Center for Latin American Studies Summer Grant 2001
- Department of Education Foreign Language Area Studies Grant, 2000-01
- Mellon Summer Field Research Travel Grants, 1999, 2000, 2001
- Harvard History Department Summer Travel Grant, 2000, 2001
- Graduate Society Term Time Research Fellowship, Spring 2000
- Harvard Graduate Student Council Summer Travel Grant, 1999

GRANTS AND FELLOWSHIPS (cont.)

- The Charles Warren Center Fellowships for Summer Research, 1998, 1999
- The Graduate Society's Summer Fellowship, Harvard University, 1998
- General Artemas Ward Fellowship, Harvard University, 1996-97, 1997-98

BOOK REVIEWS

- Review of Jonathan Grant, *Between Depression and Disarmament: The International Armaments Business, 1919-1939*, in the *American Historical Review* 25:3, June 2020
- Review of David J. Silverman, *Thundersticks: Firearms and the Violent Transformation of Native America*, in the *American Historical Review*, Oct. 2017
- Review of Rachel St. John, *Line in the Sand: A History of the Western U.S.-Mexico Border*, in the *Pacific Historical Review*, Aug. 2012.
- Review of *Bridging National Borders in North America: Transnational and Comparative Histories*, Edited by Benjamin H. Johnson and Andrew R. Graybill, *Hispanic American Historical Review*, Feb. 2012.
- Review of *Fiasco: George Clinton Gardner's Correspondence from the U.S.-Mexico Boundary Survey, 1849-1854*. Edited David J. Weber and Jane Lenz Elder, *New Mexico Historical Review* 86:3, Summer 2011, 526-28.
- Review of Juliana Barr's *Peace Came in the Form of a Woman: Indians and Spaniards in the Texas Borderlands*, for the *American Historical Review* 113 (June 2008), 878-79.
- Review of Samuel Truett's *Fugitive Landscapes: The Forgotten History of the U.S.-Mexican Borderlands*, for *Labor: Studies of Working-Class History of the Americas* 4:4 (2007), 130-32.
- Review of Gary Clayton Anderson's *The Conquest of Texas: Ethnic Cleansing in the Promised Land, 1820-1875*, for the *Journal of American History* 93:2 (2006), 530-31.
- Review of Samuel Truett and Elliott Young, eds., *Continental Crossroads: Remapping U.S.-Mexican Borderlands History*, for the *Hispanic American Historical Review* 86:4 (2006), 864-65.
- Review of Rosemary King's *Border Confluences: Borderland Narratives from the Mexican War to the Present*, for *New Mexico Historical Review*, Fall 2005.
- Review of Edward A. Goodall, *Sketches of Amerindian Tribes, 1841-1843*, for *Itinerario: The European Journal of Overseas History*, Fall 2004 (28:3).
- Combined review of Alex D. Krieger's *We Came Naked and Barefoot: The Journey of Cabeza de Vaca Across North America* and Rolena Adorno's and Patrick Charles Pautz's *The Narrative of Cabeza de Vaca* for the *Southwestern Historical Quarterly*, April 2004.
- Review of Richard Flint's "Great Cruelties Have Been Reported:" *The 1544 Investigation of the Coronado Expedition*, for the *Southwestern Historical Quarterly*, October 2003.
- Review of Allen G. Hatley's *The Indian Wars in Stephen F. Austin's Texas Colony, 1822-1835*, for the *Southwestern Historical Quarterly*, October 2001.

PRESENTATIONS & INVITED TALKS

- “The Myth of Continuity in American Gun Culture,” invited presentation at “The Future of the Second Amendment” panel at the UC Berkeley Law School, April 2024.
- “The Myth of Continuity in American Gun Culture,” invited presentation at “Why History Matters” panel at UCLA, April 2024.
- Roundtable participant in “Across the Oceans: Transnational Connections during the Long 19th Century,” American Historical Association annual conference, San Francisco, Jan. 2024
- Roundtable chair, “Beyond the Second Amendment: Rethinking U.S. Gun History,” American Historical Association Annual Conference, San Francisco, Jan. 2024
- In public conversation with Heather Cox Richardson about her book *Democracy Awakening*, Book Passage, Corte Madera, Nov. 2023.
- In public conversation with Dylan Penningroth about his book *Before the Movement*, Book Passage, San Francisco, Oct. 2023.
- “How and Why to Count Winchesters in 1868,” invited presentation at the conference “Current Perspectives on the History of Guns and Society, Wesleyan University, Oct. 2023
- “What a Junk-Shop Musket has to say about the American Revolution,” presentation at Approaching American Revolutions Symposium, USC, May 2023
- “War of a Thousand Deserts,” (virtual) presentation for the Instituto de Investigaciones Históricas, Universidad Autónoma de Baja California, March 2023
- “The Myth of Continuity in American Gun Culture,” BOCA-LONGA Conference, Stanford University, March 2023.
- “Why Dragging Canoe Sold Kentucky,” paper presentation at the Western History Association Conference, San Antonio, TX Oct. 2022
- Roundtable participant for “After 1800: Rethinking Revolution and Counter-Revolution in the Atlantic World,” USC/Écoles des Hautes Études en Sciences Sociales, June 2022
- Roundtable participant for “Empire and U.S. Foreign Relations,” Society for Historians of American Foreign Relations, June 2022
- “Aim at Empire: Arms Trading & The Fates of American Revolutions,” paper presentation at Kent State University, March 2022
- “Aim at Empire: Arms Trading & The Fates of American Revolutions,” paper presentation at the Berkeley Economic History Seminar, Feb. 2022
- “Aim at Empire: Arms Trading & The Fates of American Revolutions,” (virtual) paper presentation at El Colegio de México, Nov. 2021.
- “Tribe and Nation in North America,” comment for roundtable on Sumit Guha’s *Tribe and State in Asia through Twenty-Five Centuries*, Institute for Historical Studies, UT Austin, November 2021.
- “What is History Now,” Roundtable participant at UC Berkeley History Colloquium, October 2021
- “Tsiyu Gansini’s Predicament: Guns, Ammunition, & Cherokee Choices before the Revolution,” Rocky Mountain Seminar in Early American History, Oct., 2021
- “Aim at Empire,” talk at the UC Berkeley Institute for International Studies, Sept. 2021
- Roundtable participant in “the U.S.-Mexican Borderlands” for Janet Napolitano and Daniel Sargent’s class “Intro to Security Policy,” GSP, Berkeley, Sept. 2021

- “Arms Trading and American Revolutions,” paper for roundtable on Transnational Revolutionary History, Society for Historians of the Early American Republic, July 2021
- Roundtable on Armed Conflict and Military History, Society for Historians of American Foreign Relations annual conference, June 2021.
- “Guns Across Borders,” presentation at Revolutions Across Borders symposium, Newberry Library, June, 2021.
- “Indigenous Agency, Whiggish History, and ‘the Conquest of Mexico,’” American Historical Association, Jan. 2021
- “Arms Trading and the Fates of American Revolutions,” invited paper given in the Cambridge University American History Seminar, March 1, 2021
- “Indigenous Agency, Whiggish History, and ‘the Conquest of Mexico,’” Conference on Latin American History, Jan. 2021
- “Aim at Empire,” presentation at the Stanford Humanities Center, December 2019
- “America’s Guns, Mexico’s Trials,” Morton Mandel Public Lecture given at the invitation of the American Academy of Arts and Sciences, Berkeley, CA, Nov. 20, 2019
- “Arms Trading & New World Decolonization,” paper presented at University College, London, May 2019.
- “The Texas Gun Frontier & the Travails of Mexican History,” keynote at the 1st Biennial Symposium on Borderlands & Borders, Texas A&M University, San Antonio, April 2019
- “Guns and Revolution: The Arms Trade and the First Global Wave of Decolonization,” Boston College, September 2018
- “Migration and the History of Immigration Enforcement on the U.S.-Mexican Border,” at conference on Borders, Borderlands, and Migration, Institute of Slavic, East European, and Eurasian Studies and the Central European University, UC Berkeley, Sept. 2018
- “Shoot the State,” roundtable presentation at the Western History Association, Nov. 2017
- “The Texas Gun Frontier and the Travails of Mexican History,” Gary L. Nall Lecture, West Texas A&M, October 2017
- “Guns and Revolution: The Arms Trade and the Making of American Revolutions, 1774-1825,” University of Melbourne, October 2017
- “Dam-Breaking: How the Arms Trade Enabled the First Global Wave of Decolonization, 1775-1825,” New York University, September 2017
- “The Most Dangerous Man You’ve Never Heard Of,” invited presentation at symposium “Small Arms, Big Business: Trading Arms - Political, Cultural and Ethical Dimensions in Historical and Global Perspectives,” Zentrum für Interdisziplinäre Forschung (ZIF), Bielefeld, Germany, June 2017.
- Organizer/chair and presenter for roundtable “Arsenal to the World: The Missing History of the American Arms Trade,” OAH April 2017
- “The Ungovernable Rio Grande,” Cal History Homecoming talk, February 2017
- “The Texas Gun Frontier and the Travails of Mexican History, or, No More Weapons! (Unless they’re for Us),” CENFAD Colloquium, Temple University, January 2017
- “The Texas Gun Frontier and the Travails of Mexican History, or, No More Weapons! (Unless they’re for Us),” University of Connecticut, October, 2016

PRESENTATIONS & INVITED TALKS (cont.)

- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Harvard University, October 2016
- “How Transimperial Arms Bazaars Stabilized Instability in the Greater Caribbean,” Rothermere Institute, Oxford University, May 2016
- “The International Arms Trade and the Brittle State in Mexico, 1810-1920,” University of Chicago Latin American Seminar, December 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Northwestern University, December 2015
- “Guns and the Making of the Modern Americas,” Stanford University, November 2015
- “The Texas Gun Frontier and the Travails of Mexican History,” UT Austin, November 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” University of Cincinnati, September 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Society for Historians of American Foreign Relations, Conference Keynote, June 2015
- “War of a Thousand Deserts,” San Jacinto Symposium, Houston, TX, April 2015
- “Dambreaking: Guns, Mercantilism, and the Demolition of Europe’s America,” the James P. Jones endowed lecture, Florida State University, March 2015
- “Dambreaking: Mercantilism, Armaments, and the Demolition of Europe’s America,” Indiana University, October 10, 2014
- “Gotham’s Gun Barons: New York City Arms the Americas, 1865-1934,” Doshisha University, Kyoto, Japan, July 25, 2014
- “How Borderland Indians Shaped the Era of the U.S.-Mexican War,” Keynote address for the 2014 Doshisha American Studies Seminar, Kyoto, July 26, 2014
- “War and Trade,” Roundtable on new histories of trade, Society for Historians of American Foreign Relations, Lexington, June 2014
- “Gotham’s Gun Barons: New York City Arms the Americas, 1865-1934,” Cambridge University, November 25, 2013
- “A Protest of Arms: Guns and the Brittle State in Mexico, 1810-1920,” Cambridge University Borderlands Workshop, November 11, 2013
- “Gotham’s Gun Barons: New York City Arms the Americas,” Oxford University, Oct 2013
- “Marcellus Hartley: The Most Dangerous Man You’ve Never Heard Of,” OAH April 2013
- “A Good Story,” invited presentation to admitted students at Cal Day, April 20, 2013
- “Beware the Metanarrative; or, How I Acquired My Resistance to Resistance,” Kaplan Lecture, University of Pennsylvania, March 2013
- “Domestic Dependent Notions: American Indians and the First Few Pages of American Empire,” American Studies Association meeting, San Juan, Nov. 2013
- “Indian History and the History of American Foreign Relations,” Society for Historians of American Foreign Relations annual conference, June 2012
- “How Not to Arm a State: American Guns and the Mexican National Project, 1810-1920,” Society for Historians of American Foreign Relations annual conference, June 2012

PRESENTATIONS & INVITED TALKS (cont.)

- “Opportunism, Anxiety, and Idealism: U.S. Impulses during the French Intervention in Mexico,” invited paper at el Simposio Internacional 5 de Mayo de Mexico, Biblioteca Palafoxiana, Puebla, Mexico, May 2012.
- “How Not to Arm a State: American Guns and the Mexican National Project, 1810-1920,” Organization of American Historians annual conference, April 2012
- Chair, roundtable on the state of the field in U.S.-Mexico Borderlands History, Organization of American Historians annual conference, April 2012
- “So Far From God, So Close to the Gun Store: Borderlands Arms Trading and the Travails of Mexican History,” 26th Annual W.P. Whitsett Lecture, CSU Northridge, March 2012
- “War of a Thousand Deserts,” at the Tattered Cover Bookstore, Denver, CO, March 2012
- “Frontiers, Borderlands, and Transnational History,” Huntington Library symposium on the Significance of the Frontier in an Age of Transnational History, Feb. 2012 [Audio in file#2]
- “Sailing Backwards on Mexico’s ‘Iron River of Guns’: The Political Economy of the Arms Trade in the 19th and 21st Century’s, Harvard Kennedy School, Feb. 2012
- “The Drug War and Borderlands History,” Cal Alumni Day, Oct. 2011.
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” invited presentation at Stanford University’s Comparative Wests Seminar, April 2011
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” invited talk for round two of Contested Spaces in Early America symposium, Clements Center for Southwest Studies, Southern Methodist University, Dallas, TX, April, 2011
- “Blood Talk: People and Peoples in the Navajo-New Mexican Borderland,” invited talk at UCLA’s American Indian Studies Center, March 2011
- “Blood Talk: People and Peoples in the Navajo-New Mexican Borderland,” invited talk presentation the USC-Huntington Early Modern Studies Institute and the Autry Museum of Western Heritage, March 2011
- “People and Peoples in Borderland Relations: Blood Talk in New Mexico,” invited talk for Contested Spaces in Early America symposium, McNeil Center for Early American Studies, University of Pennsylvania, Philadelphia, PA October 2010
- “How Indians Shaped the U.S.-Mexican War,” invited talk for the Bay Area Latin America Forum, Berkeley, CA September 2010
- “Indians and the U.S.-Mexican War,” invited talk at University of North Texas, Sept. 2010
- “Patterns of Violence in Navajo-New Mexican Relations,” Pacific Coast Branch of the American Historical Association annual meeting, Santa Clara CA, August 2010
- “States and Stateless Peoples in George Herring’s *From Colony to Superpower*,” Society for Historians of American Foreign Relations annual meeting, Madison, WI, June 2010
- “Indians, Politics, and 19th-Century American Empire,” UC Berkeley-Stanford-UC Davis faculty dinner, April 2010
- “War of a Thousand Deserts,” invited Keynote Address to the James Rawley Conference in the Humanities, University of Nebraska, Lincoln, April 2010
- “19th Century Lessons for Today’s Drug War Policies,” History as a Resource for Decision Making, UC Berkeley, March 2010

PRESENTATIONS & INVITED TALKS (cont.)

- "Comanches in the Cast: Recovering Mexico's 'Eminently National War, 1830-1846,'" Bancroft Sesquicentennial Symposium, Berkeley, CA, March 2010.
- "Mexico, Native Polities, and the Continuous 19th Century American Empire," invited talk for the Harvard Symposium on 19th Century Empire, Cambridge, MA April 2009
- "War of a Thousand Deserts: How Indians Shaped the Era of the U.S.-Mexican War," paper presented to the El Paso History Museum, February 2009
- "War of a Thousand Deserts: How Indians Shaped the Era of the U.S.-Mexican War," paper presented at the Texas Community College Teachers Association Conference, Austin, Feb. 2009
- "Putting Indians into the U.S.-Mexican War," paper presented at the Organization of American Historians annual meeting, New York, March 2008.
- "Military History and Non-State Peoples," roundtable paper presented at the American Historical Association conference, Washington D.C., Jan. 2008.
- "The French and Indian War," public talk for the High Plains Chautauqua, Greeley, CO, Aug. 8, 2007
- "The Comanche Lens: Seeing Nation States through Tribes on the U.S.-Mexican Borderlands," invited talk at the University of San Diego Trans-Border Institute, April. 2007.
- "The Comanche Lens: Seeing Nation States through Tribes on the U.S.-Mexican Borderlands," invited talk at the George and Anne Richards Civil War Era Center, Penn State University, Jan. 2007.
- "Independent Indians, the U.S.-Mexican War, and the Reshaping of North America," paper presented at the American Historical Association conference, Atlanta, GA, Jan. 2007 (*Panel organizer*)
- "Opportunity Costs: Southern Comanches between Mexico and Texas, 1836-1846," paper presented at the Filson Institute's Comparative Borderlands Conference, Louisville, KT, Oct. 2006.
- "The War of a Thousand Deserts: Indians, the U.S.-Mexican War, and the Reshaping of North America," Clements Center Brown Bag series, Southern Methodist University, Feb. 2006.
- "Independent Indians and Borderlands Scholarship in the Americas" roundtable presentation at the Conference on Latin American History, Philadelphia, PN, Jan. 2006.
- "Comanches in the Cast: Remembering Mexico's 'Eminently National War,' 1830-1846," paper at the Latin American Studies Association Conference, Los Vegas, NV Oct. 2004
- Invited comment on Marie Duggan's "Franciscan Missions as Institutions of Economic Development: The Case of California, 1769-1832," at the Boston Area Latin American Seminar, Dec. 2003
- Invited comment on David J. Weber's "Spaniards and their Savages in the Age of Enlightenment," at the Boston Area Latin American Seminar, Oct. 2002.
- "Mexicans, Indians, and Anglo-Americans: Ethnic Conflict and Territorial Expansion, 1776-1854," paper presented at the Harvard Ethnic Studies Conference, Cambridge, MA, Feb. 2002.

PRESENTATIONS & INVITED TALKS (cont.)

- “Americans Watching: Savage Indians, Suffering Mexicans, and Manifest Failures, 1835-1854,” paper presented at the American Historical Association conference, San Francisco, Jan. 2002.
- “The War of a Thousand Deserts: Indian Power & the Contest for Mexico, 1835-1854,” paper presented at the Conference on Latin American History, San Francisco, Jan. 2002
- “Indian Power and the Fragmentation of Northern Mexico, 1835-1846,” paper presented at the Western History Association Conference, San Diego, CA, Oct. 2001. (*Panel organizer*).
- “Americans Watching: Savage Indians, Suffering Mexicans, and Manifest Failures, 1835-1854,” paper presented at Global America: The New International History Conference, Harvard, April 2001.
- Commentator at roundtable discussion of Fred Anderson’s *Crucible of War* at the Charles Warren Center for Studies in American History, Harvard University, Feb. 2000.

CONSULTING

- Washington D.C.
 - Submitted declaration for the Attorney General’s Office of Washington D.C. in defense of district law limiting high-capacity gun magazines in Hanson et al., v. District of Columbia, Case No. 22-cv-02256 (D.D.C.), Nov. 2022.
- Oregon
 - Submitted declaration as expert witness for the Attorney General’s Office of the State of Oregon in defense of state law limiting high-capacity gun magazines in Joseph Arnold et al., v. Tina Kotek, et al., No. 22CV41008 (Harney Cnty. Cir. Ct.), Dec. 2022. Testified remotely in preliminary injunction trial, Dec. 2022. Testified in person at the case trial, Sept. 2023.
 - Submitted declaration for Attorney General’s Office of the State of Oregon in defense of state law limiting high-capacity gun magazines in *Oregon Firearms Federation et al. v. Tina Kotek et. al.*, 2:22-cv-01815-IM (D. Ore.) (lead case); Mark Fitz, et al., v. Ellen F. Rosenblum, et al., 3:22-cv-01859-IM (D. Ore.) (trailing case); Katerina B. Eyre, et al., v. Ellen F. Rosenblum et al., 3:22-cv-01862-IM (D. Ore.) (trailing case); and Daniel Azzopardi, et al., v. Ellen F. Rosenblum, et al., 3:22-cv-01869-IM (D. Ore.) (trailing case). Feb. 2023. Deposed March 14, 2023. Testified in Fed Dist. Court trial in Portland, June 2013.
- Illinois
 - Submitted declaration for Attorney General’s Office of the State of Illinois in defense of its law limiting assault weapons and high-capacity magazines in Harrel v. Raoul, Case No. 23-cv-141-SPM (S.D. Ill.); Langley v. Kelly, Case No. 23-cv-192-NJR (S.D. Ill.); Barnett v. Raoul, 23-cv-209-RJD (S.D. Ill.); Federal Firearms Licensees of Illinois v. Pritzker, 23-cv-215-NJR (S.D. Ill.); Herrera v. Raoul, 23-cv-532 (N.D. Ill.); and *Kenneally v. Raoul, et al.*, 23-cv-50039 (N.D. Ill.). March, 2023.

CONSULTING (cont.)

- California
 - Submitted declaration for Attorney General's Office of the State of California in defense of its law limiting high-capacity magazines in William Wiese, et al., v. Rob Bonta, et al., 2:17-cv-00903-WBA-KJN (E.D. Cal.), May 2023.
- Washington (state)
 - Submitted declaration for Attorney General's Office of the State of Washington in defense of its law limiting high-capacity magazines in Gabriella Sullivan, et al., v. Bob Ferguson, et al., (W.D. Wash.), 3:22-cv-05403, May 2023; and in *Brumback, et al., v. Bob Ferguson, et al.*, (E.D. Wash.), 1:22-cv-03093-MKD, Jan. 2024.
 - Submitted report in defense of WA assault weapons law, for Intervenor-Defendant Alliance for Gun Responsibility in *Hartford et al. v. Ferguson, et al.*, No. 3:23-cv-05364-RJB; *Banta, et al. v. Ferguson and Batiste*, No. 2:23-cv-00112-MKD; and *Guardian Arms, et al., v. State of Washington, et al.*, No. 23-2-01761-34, Jan. 2024.
- Colorado
 - Submitted expert report for the Town of Superior, Cities of Superior and Boulder, and Board of County Commissioners of Boulder County in defense of their laws limiting certain firearms and high-capacity magazines in Rocky Mountain Gun Owners et al., v. the Town of Superior et al., (D. Colo.), 22-cv-2680, May 2023.
 - Submitted expert declaration for Attorney General's Office of the State of Colorado in defense of its law regulating ghost guns in National Association of Gun Rights et al., v. Jared S. Polis (D. Colo), 24-cv-00001-GPG-STV. Feb. 2024; testified March, 2024.
- New Jersey
 - Submitted expert report for Attorney General's office of the State of New Jersey in defense of its laws regulating assault weapons and high-capacity magazines in *Association Of New Jersey Rifle & Pistol Clubs, Inc. et al. v. Platkin et al.*, 3:18-cv-10507; *Cheeseman et al. v. Platkin et al.*, 1:22-cv-04360; *Ellman et al. v. Platkin et al.*, 3:22-cv-04397, July 2023.
- Delaware
 - Submitted declaration for Attorney General's office of the state of Delaware in defense of its law regulating ghost guns in *John Rigby et al. v. Kathy Jennings et al.* 1:21-cv-01523-MN, Sept. 2023.
- Nevada
 - Submitted declaration for Attorney General's office of the state of Nevada in defense of its law regulating ghost guns in *Roger Palmer et al., v. Stephen Sisokak et al.*, 3:21-cv-00268, April 2024.
- Supreme Court
 - Contributor and signatory to Brief for Amici Curiae Professors of History and Law in Support of Petitioner, United States of America v. Zackey Rahimi, 2023.

TEACHING

Classes Offered at UC Berkeley

- HIST 7a: Lower-division lecture – *North America through Reconstruction*, 2011, 2012, 2015, 2018, 2020, 2021 (always in fall)
- HIST 100: Upper-Division Lecture - *American Encounters*, Fall 2009
- HIST 101: Undergraduate Research Seminar - *Senior Thesis Seminar* Spring 2010; Spring 2012, Spring 2013, Fall 2014, Spring 2022, Spring 2023
- HIST 102: Undergraduate Research Seminar, *Senior Thesis Seminar*, Spring 2024
- HIST 103: Undergraduate Reading Seminars:
 - *Borderlands in North America*, Fall 2009
 - *The U.S. and Latin America in the 19th C.*, Spring 2012
 - *The Border* (reading seminar), Fall 2016
 - *The Radicalism of American Revolutions*, Fall 2022
- HIST 104: Undergrad lecture/seminar- *The Craft of History*, Spring 2015, Spring 2017
- HIST 135B: Upper-division lecture - *Encounter and Conquest in Indigenous America*, Spring 2019, Spring 2022, Spring 2023, Fall 2023
- HIST 280: Graduate Reading Seminars:
 - *Borderlands in World History*, Fall 2011
 - *The Making of the Modern World, through the Age of Revolutions* (Sem.), Fall 2014 (co-taught with Daniel Sargent)
 - *The Making of the Modern World, since the Age of Revolutions* (Sem.) Spring 2015 (co-taught with Daniel Sargent)
 - *Borderlands in North America* (reading seminar), Spring 2015
 - *Native North American History* (reading seminar), Spring 2021
- HIST 285: Graduate Research Seminars:
 - *American History before 1900*, Spring 2013, Fall 2015
 - *Topics in American History*, Fall 2018, Spring 2024
- HIST 375: Graduate Sem: *Teaching History at the University* (pedagogy), Spring 2021

Classes Offered at the University of Colorado

- HIST 1015: Lower-Division lecture - *U.S. History to 1865*, Fall 07', Fall 08'
- HIST 1035: Lower-Division lecture - *Honors: United States History to 1865*, Fall 04'
- HIST 2015: Lower-Division lecture - *Early America*, Fall 06'
- HIST 3050: Undergraduate seminar - *The Arms Trade in World History*, Spring 09'
- HIST 3317: UG sem. - *Interethnic Borderlands in the American West*, Fall 04', Fall 07
- HIST 4115: Upper-Div. lec – *Natives & Newcomers in the Americas*, Fall 06', Spring 08'
- HIST 4327: Upper-Division lecture - *Novelty, Conflict, and Adaptation in the American Southwest*, Spring 05', Spring 08'
- HIST 4617: Upper-Division lecture - *Native North American History: Origins to 1815*, Spring 05', Spring 07', Spring 09'
- HIST 5106: Graduate Reading seminar - *Colloquium: U.S. History to 1865*, Fall 08'
- HIST 6030: Grad. Reading sem - *Frontiers and Borderlands in the Americas*, Spring 07'

PhD Students (1) = advisor/co-advisor; (2) 2nd reader

- **Current Students:**
 - Russ Weber
 - Dissertation: Emotions and the political history of the early republic.
 - Kyle Jackson (1)
 - Dissertation: New Orleans and Pan-Americanism before WWI
 - Noah Ramage (1)
 - Dissertation: The Cherokee Nation in the late 19th Century
 - Annabel LaBrecque (1)
 - “Deep Histories of Salt in North America”
 - Julia Frankenbach (1)
 - Livestock Production, Gender, and Power in the Greater Indigenous Bay Area
 - Lissett Bastidas (1)
 - Colonialism and Resistance in Mexican-Ear California
- **Former PhD Students:**
 - Ariel Ron (2), Glenn M. Linden Associate Professor of the U.S. Civil War Era, Southern Methodist University
 - Dissertation: “Developing the Country: ‘Scientific Agriculture’ and the Roots of the Republican Party” (2012)
 - Mattie Harper, Grantmaking Officer, Bush Foundation
 - Dissertation (Ethnic Studies): “French Africans in Ojibwe Country: Negotiating Marriage, Identity, and Race, 1780-1890” (2012)
 - Melisa Galván (2), Associate Professor, California State University, Northridge
 - Dissertation: “From Contraband Capital to Border City: Matamoros, 1746-1848,” (2013)
 - Allie McLafferty, History Instructor, St. Stephens Episcopal School, Austin, TX
 - Dissertation: “‘A Plumb Craving for the Other Color’: White Men, Non-White Women, and the Sexual Crisis in Antebellum America,” (2013)

Former PhD Students, cont.

- Jennifer Carlson, Associate Professor of Sociology and Government & Public Policy, University of Arizona
 - Dissertation (Sociology): “Clinging to their Guns?: The New Politics of Gun Carry in Everyday Life,” 2013
- Delia Hagen (1), Founding Director Hagen Historical Consulting, Missoula, Montana
 - Diss: “Northern Plains Borders and the People In Between, 1860-1940” 2015
- Bathsheba Demuth (2), Dean’s Associate Professor of History and Environment & Society, Brown University
 - Dissertation: “The Power of Place: Ideology and Ecology in the Bering Strait, 1848-1988” (2016)
- Alberto Garcia (2), Assistant Professor, San José State University
 - Dissertation: “The Politics of Bracero Migration” (2016)
- Robert Lee (2), University Lecturer, Cambridge University

DeLay CV 14

NEV 0096

- Dissertation: “Louisiana Purchases: The U.S.-Indian Treaty System in the Missouri River Valley” (2017)
- Erica Lee (1), Analyst in Emergency Management and Disaster Recovery, Congressional Research Service, Washington, D.C.
 - Dissertation: “Sanctuaries into Fortresses: Refugees and the Limits of Obligation in Progressive-Era America” (2017)
- Javier Cikota (2), Assistant Professor, Bowdoin College
 - Dissertation: “Frontier Justice: State, Law, and Society in Patagonia, 1880-1940” (2017)
- David Tamayo (2), Assistant Professor, University of Michigan
 - Dissertation: “Serving the Nation: Rotary and Lions Clubs, the Mexican Middle Classes, and the Post-Revolutionary State, 1920s-1960s” (2018)
- Julia Lewandowski (1), Assistant Professor, University of California, San Diego
 - Dissertation: “Small Victories: Indigenous Proprietors Across Empires in North America” (2019)
- Franklin Sammons (1), Assistant Professor, Washington & Lee
 - Dissertation: “Yazoo’s Settlement: Finance, Law, and Dispossession in the Southeastern Borderlands, 1789-1820
- Sophie FitzMaurice (1) Postdoctoral Fellow, Joint Center for History and Economics, Magdalene College and King’s College, University of Cambridge
 - Dissertation: “The Material Telegraph: An Environmental History of the Technology that Wired America, c. 1848-1920.”
- J.T. Jamieson (2)
 - Dissertation: “‘A Mere Change of Location’: Migration and Reform in America, 1787-1861.”

SERVICE

University of California, Berkeley History Department

- Search Committees:
 - Native North American History Search Committee, 2021-22'
 - US West Search Committee, 2018-19'
 - 20th Century Latin America Search Committee, 2014-15'
 - U.S. History Search Committee (Chair), 2012-13'
 - Latin America Search Committee, 2011-12'
- Endowed Chairs Committee, 2021-22'
- AC-5 Grad Admissions Committee, 2020-21', 2022-23', 2023-24' (chair)
- Governance Task Force Committee, 2014-15'
- Committee on the History Undergraduate Major,
 - 2011-12' (chair, spring 2012); 2015-16'; 2016-17' (chair)
- Honors Committee, 2009-10'
- Admissions Committee, US Field, 2009-10'
- Reentry and Disabled Student Advisor, 2009-10'
- Faculty co-sponsor, with Daniel Sargent, of the Berkeley International and Global History Conference (BIG-H), 2011-2017

DeLay CV 15

NEV 0097

SERVICE (cont.)

- Co-founder (with Daniel Sargent) and co-organizer (since 2021 with Rebecca Herman) of the Berkeley Global History Seminar, 2010-Present.

University of California, Berkeley, Campus Service

- Senate Liaison for external review of UC Berkeley Department of Ethnic Studies, 2021
- Letters & Sciences Executive Committee, 2020-2023
 - L&S Executive Committee Liaison for the external review of UC Berkeley Department of Slavic Languages & Literatures, 2022
- Berkeley Institute for International Studies (IIS)
 - IIS Directorship Search Committee, 2021
 - IIS Faculty Board, 2020-present
 - IIS Simpson Award Committee, 2012; 2013; 2015 (chair); 2016-2019.
- Bancroft Library
 - Friends of the Bancroft Library Council, 2021-present
 - Bancroft Library Prize Committee, 2015, 2016, 2017, 2019, 2020
- Academic Senate Committee on Committees, 2015 – 2017
- American Cultures Senate Subcommittee, 2011-12'

University of Colorado History Department

- Departmental Undergraduate Studies Committee, 2007-08'
- Departmental Executive Committee, 2006-07'
- Robert G. Athearn Lecture organizer, 2006
- Judge for Colorado History Day, Spring 2005
- History Department Graduate Studies Committee, 2004-05', 2008-09'
- Phi Alpha Theta/History Club Advisor, Fall 2004

Professional Service, Memberships, K-12 and Public Outreach

- Professional Service:
 - Series Editor with Steven Hahn and Amy Dru Stanley for University of Pennsylvania Press book series, "America in the Nineteenth Century", 2014-present. Within the series, I have had served as faculty editor for the following books, working closely with their authors throughout the process:
 - William Kiser, *Borderlands of Slavery: The Struggle Over Captivity and Peonage in the American Southwest* (2017)
 - Noelani Arista, *The Kingdom and the Republic: Sovereign Hawai'i and the Early United States* (2019)
 - Katherine Bjork, *Prairie Imperialists: The Indian Country Origins of American Empire* (2019)
 - Alaina Roberts, *I've been Here All the While: Black Freedom on Native Land* (2021)
 - Paul Conrad, *The Apache Diaspora: Four Centuries of Displacement and Survival* (2021)
 - William Kiser, *Illusions of Empire: The Civil War and Reconstruction in*

DeLay CV 16

NEV 0098

- *the U.S.-Mexico Borderlands* (2021)
- Sarah Keyes, *American Burial Ground: A New History of the Overland Trail* (2023)
- Editorial Board Service:
 - *Reviews in American History*, 2019-2022
 - *Journal of the Early Republic*, 2020-2022
 - *Journal of the Civil War Era*, 2016-2018
 - *Pacific Historical Review*, 2012-2015
 - *Ethnohistory*, 2009-2012
- Prize Committees:
 - Robert M. Utley Award Com., Western History Association, 2022-2025
 - Ray Allen Billington Prize Committee, Organization of American Historians, 2017-2019.
 - David J. Weber-Clements Center Prize Committee, Western History Association, 2016-2018.
 - Bernath Lecture Prize Committee, Society for Historians of American Foreign Relations, 2015-2018.
 - Louis Knott Koontz Memorial Award committee, Pacific Coast Branch of the American Historical Association, 2012-15
 - CLAH Article Prize Committee (Chair), Conference on Latin American History, 2012
 - John Ewers Book Prize Committee, Western History Association, 2012
 - Sons of the Republic of Texas, Summerfield G. Roberts Book Award Committee, 2010-2012
 - Western History Association's Huntington-WHA Ridge Prize Committee, 2009-2011.
- Conference Committees:
 - Conference Planning Committee, Society for Historians of the Early American Republic, 2021, 2025
 - Society for Historians of American Foreign Relations, Conference Planning Committee, 2012 and 2013
 - Organization of American Historians, Conference Planning Com., 2012
 - Society for Historians of the Early Republic, Conference Planning Committee, 2012
 - Local Arrangements Committee, Western History Association Annual Conference, Denver, 2009
 - American Society for Ethnohistory, Conference Planning Com., 2005
- Manuscript Reviewer for *American Historical Review*, *Ethnohistory*, *Western Historical Quarterly*, the *Journal of American History*, *Modern American History*, *Law and History Review*, *Economics and Human Biology*, *History: the Journal of the Historical Association*, *Journal of the Early Republic*; *Enterprise & Society*; *William & Mary Quarterly*; *the Southwestern Historical Quarterly*; Oxford University Press, Harvard University Press, Princeton University Press, University of Pennsylvania Press, University of California Press, University of Arizona Press, Basic Books, Yale University Press, University of Colorado Press,

DeLay CV 17

NEV 0099

SERVICE (Manuscript Reviews, cont)

University of Kansas Press, Cornell University Press, Palgrave & Macmillan; University of North Carolina Press, Duke University Press, University of Virginia Press, University of Tennessee Press, Texas A&M University Press; University of Nebraska Press, Blackwell Publishing, and Rourke Publishing.

- Other Professional Service:
 - Co-Chair, Taskforce on Conference Conduct and Sexual Harassment, 2019, Society for Historians of American Foreign Relations
 - Nominating Committee, Western History Association, 2019-2021
 - External Reviewer for UC Davis Undergraduate Program Review, 2017
 - Secretary and then Chair, Borderlands & Frontiers Studies Committee, Conference on Latin American History, 2011-2012
 - Grant/Fellowship reviews for: National Science Foundation; Comisión Nacional de Investigación científica y tecnológica (Chile)
 - Evaluations and nominations for the MacArthur Fellowship Program
- Member: American Historical Association; Org. of American Historians; Conference on Latin American History; Society for Historians of American Foreign Relations; Society for Historians of the Early American Republic; Western History Association.
- K-12 and Public Outreach:
 - Academic Advisor, Teaching American History Grant “American Democracy in Word and Deed,” Mt. Diablo School District, CA, 2009-2013.
 - Presenter at Teaching American History Grant workshops in Oakland, CA, Dec. 2009, May 2010, and Oct. 2010.
 - Lead Presenter at Teaching American History or Gilder-Lehrman workshops for primary-school teachers in:
 - Hartford, Delaware, June 2012

Professional Service – K-12 and Public Outreach, cont.

- New Orleans / San Antonio, June 2012
- Chicago, IL (June 2011)
- Deer Valley, AZ (Feb., 2010)
- Crescent City, CA (Jan., 2009 and April, 2010);
- Eureka, CA (Jan., 2009);
- Huntsville, Alabama (June 2008 and June 2009)
- Media:
 - Interviewed for Faculti.net on “The Myth of Continuity in American Gun Culture,” April 2024
 - Interviewed about the film There Will Be Blood for Historians at the Movies Podcast, Feb. 2024.
 - Interviewed about “The Arms Trade & American Revolutions” for the American Historical Review’s podcast History in Focus, October 2023.
 - Interviewed for episodes 1 & 2 of The Gun Machine podcast, by WBUR and The Trace, October 2023.
 - Hour-long interview with the History of California Podcast, Oct. 2020

- **Media (cont)**

- On-air interview for BBC News World Service on gun law following the massacres in Gilroy, El Paso, and Dayton, August 10, 2019
- On-air interview for extended program "The American Gun Industry: A Billion Dollar Business," Australian Broadcasting Corp., March, 2018
- On-air Interview for BBC Newsday on Remington's bankruptcy, March 27, 2018
- On-air interview for "City Visions," KALW San Francisco, on youth protests against gun violence, March 26, 2018
- On-air interview, BBC Radio 5 on America's gun business, Feb. 26, 2018
- On-air interview for "The Attitude," Pacifica Network, on America's gun business, February 20, 2018
- "Gotham's Gun Baron," Spoken essay for BBC Radio Three program *The Essay*, January 2017
- On-screen consultant for German documentary on the U.S. presidency, "Die US-Präsidenten und der Krieg," produced by Westdeutscher Rundfunk and aired nationally in Germany in November 2016.
- "Guns, Capitalism, and Revolution in the Americas," 2015 SHAFR keynote address filmed and broadcast on CSPAN's American History TV, (first aired August 1, 2015).
- Interview with Deborah Lawrence and Jon Lawrence for Contesting the Borderlands: Interviews on the Early Southwest (University of Oklahoma Press, 2016), 182-200.
- Guest of NPR's Backstory, with the American History Guys, Jan 17, 2014
- Invited essay for the *New York Times' Room for Debate* feature, July 2, 2013
- Guest on NPR's "On Point with Tom Ashbrook," Nov. 7, 2012.
- Guest on PRI's "The World," April 12, 2011
- On-screen consultant for "The Mexican-American War," Oct. 29, 2006, History Channel
- KERA "Think" radio interview on *War of a Thousand Deserts*, 2008.

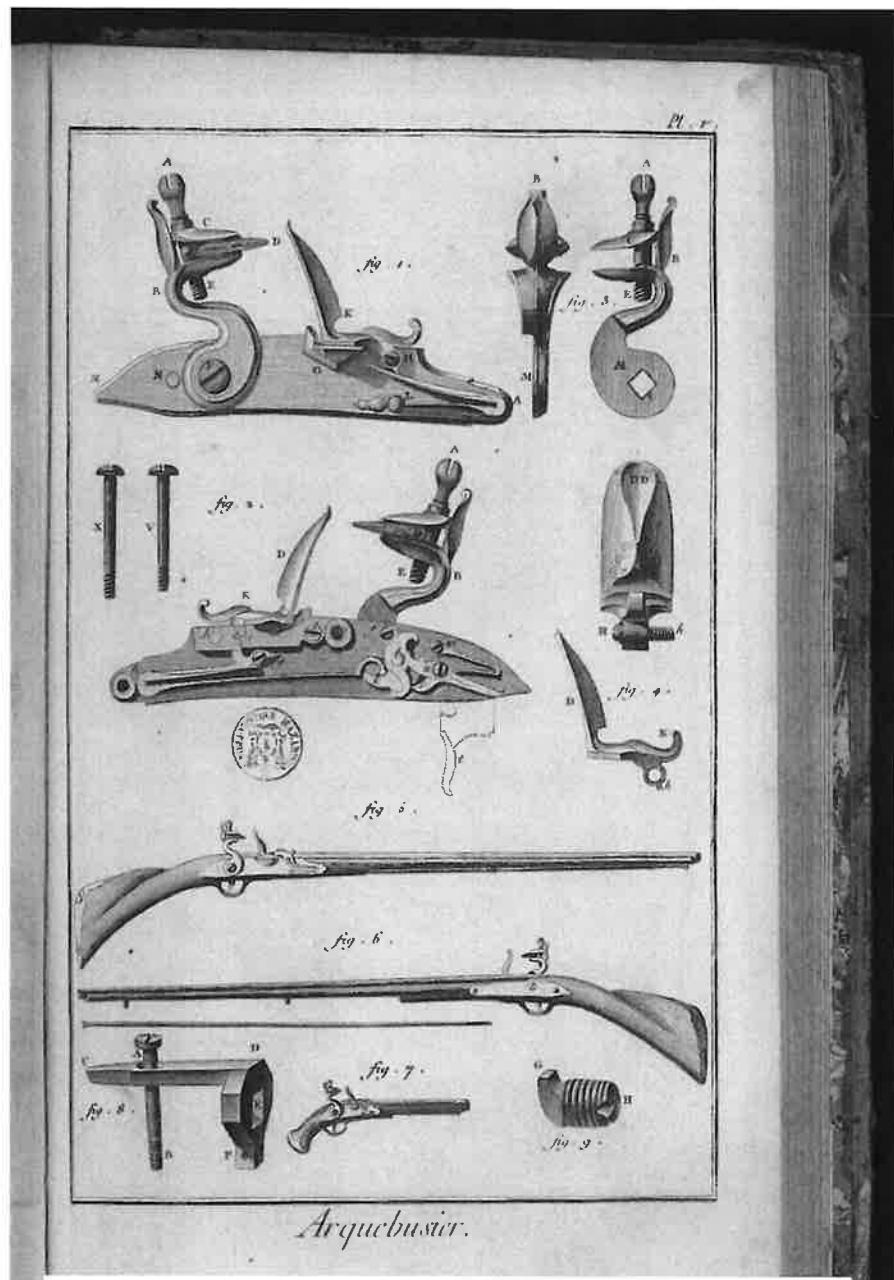
EXHIBIT B

Engravings Published in 1770
as a supplement to the
Encyclopédie, Enlightenment

precise views of the
(finished lock mechanism)

EXHIBIT B

Exhibit B



*Views of a mid-18th-century French flintlock mechanism, lock screws, cock/hammer, frizzen/battery, muskets, false breech, pistol, and breech plug, from Diderot's *L'encyclopédie*, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers: Recueil de Planches sur les Sciences et les Arts (Paris, 1770), vol. 1, Plate V. Note the outline of the trigger, below f. 2.*

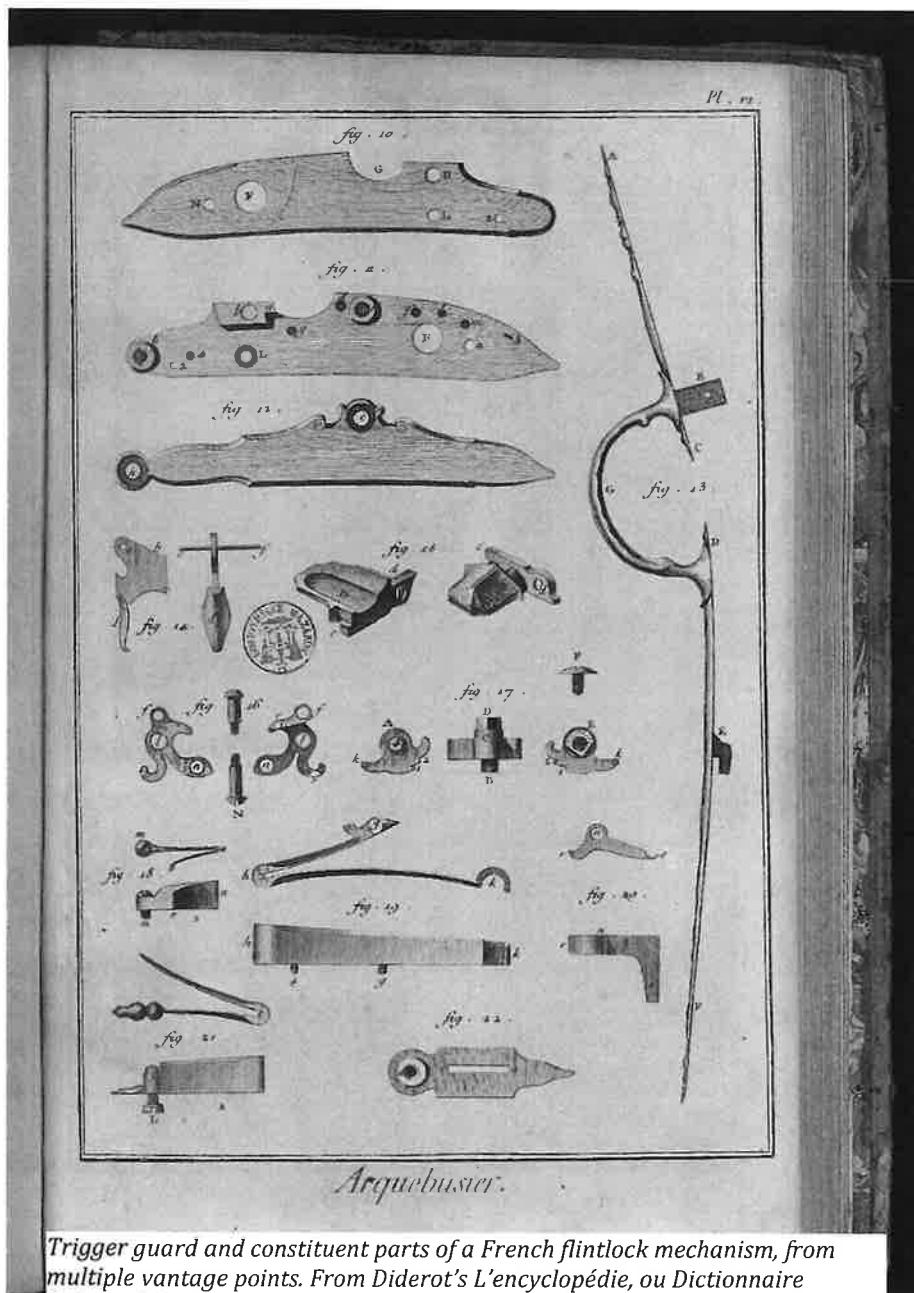
EXHIBIT C

Engravings Published in 1770
as a supplement to the
Encyclopédie, Enlightenment

precise views of the
(constituent parts)

EXHIBIT C

Exhibit C



Trigger guard and constituent parts of a French flintlock mechanism, from multiple vantage points. From Diderot's L'encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers: Recueil de Planches sur les Sciences et les Arts.

EXHIBIT D

Rate Sheet Brian DeLay

EXHIBIT D

NEV 0106

Rate Sheet

\$250 an hour

\$400 Testifying Rate

\$400 an hour for travel